

# Sources of Hazardous Substances in the PASSAIC RIVER STUDY AREA

POTENTIALLY RESPONSIBLE PARTY:

AUTOMATIC ELECTROPLATING CORPORATION

PREPARED BY:  
CHEMICAL LAND HOLDINGS, INC.  
ON BEHALF OF THE  
OCCIDENTAL CHEMICAL CORPORATION

843600006

**INDEX OF DOCUMENTS IN SUPPORT OF  
COMMENTS CONCERNING  
AUTOMATIC ELECTROPLATING CORPORATION**

**TAB A:     Diagram of Foundry Street Complex**

This diagram indicates that Automatic Electroplating occupies buildings #19, #21, and #22 at the Foundry Street complex.

**TAB B:     Excerpt from New Jersey Department of Environmental Protection,  
Responsible Party Investigation**

This report documents that Automatic Electroplating used a variety of hazardous substances containing nickel, zinc, silver, copper, chromium, arsenic and cyanide at its facility. This report also documents that discharges from the Automatic Electroplating facility flowed to drains on the property which were connected to the Roanoke Avenue storm sewer and discharges to these drains contained hazardous substances.

**TAB C:     Excerpt from PVSC Heavy Metal Source Determination Study**

In 1976 the PVSC requested a study of the sources of heavy metals in the influent to the PVSC system. A sample of the effluent of Automatic Electroplating to the PVSC taken as part of this study documented cadmium, copper, lead and other heavy metals were discharged by Automatic Electroplating.

**TAB D:     Diagram of Discharge Flow from Foundry Street Complex**

This diagram indicates that discharges from the Foundry Street complex flowed to the Roanoke Avenue combined sewer.

**TAB E:     Excerpt from Clinton Bogert Associates Report**

Report states that as a result of the malfunctioning regulator at Avenue P, all flow into the Roanoke Avenue combined sewer entered the Passaic River.

**TAB F:     EPA Potentially Hazardous Waste Site Preliminary Assessment**

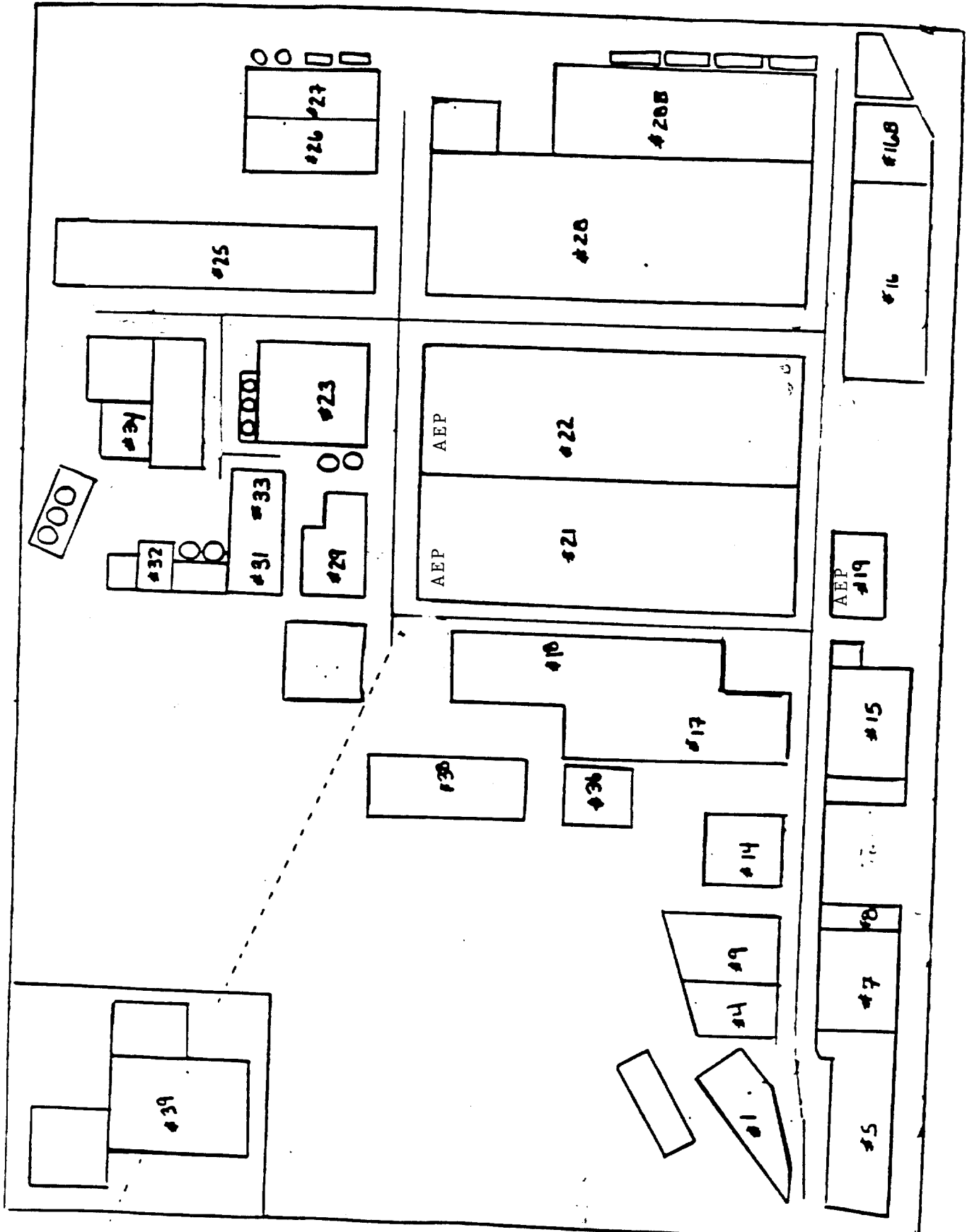
This report indicates that runoff from the Foundry Street complex discharges to storm drains and thence directly to the Passaic River. This report also notes that groundwater contamination from the Foundry Street complex may discharge to the Passaic River.

A

843600008

FOUNDRY STREET COMPLEX

FOUNDRY STREET



B

843600010



**State of New Jersey**  
**DEPARTMENT OF ENVIRONMENTAL PROTECTION**  
**DIVISION OF HAZARDOUS WASTE MANAGEMENT**  
**LANCE R. MILLER, DIRECTOR**  
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**RECEIVED**

**APR 3 1991**

**M E M O R A N D U M**

**TO:** Linda Grayson, Chief  
Bureau of Planning and Assessment

**FROM:** Doug Stuart, Acting Chief  
Bureau of Compliance and Technical Services

**SUBJECT:** Responsible Party Investigation  
Foundry Street Complex  
(AKA Arkansas Chemical, Hummel Chemical)  
185 Foundry Street, Newark, NJ

The Bureau of Compliance and Technical Services' Special Investigation Section has prepared the attached Responsible Party Investigation Summary for the subject case to assist the Bureau of Planning and Assessment in its site evaluation.

Please be advised that referenced key documents are maintained in this bureau's files. Should you have any questions in this matter, do not hesitate to contact me at (609) 633-0708.

lmc

c Y. Yacoub, Chief, MBPO  
P. Smith, Investigator, SIS/BCTS  
B. Patterson, ECRA  
RPIU File



FOUNDRY STREET COMPLEX  
AKA ARKANSAS CHEMICAL AND HUMMEL CHEMICAL

SUMMARY

The Foundry Street Complex consists of six separate parcels of land, Lots 4 (Block 5005); Lot 5 (Block 5005); Lot 6 (Block 5005); Lot 10 (Block 5005); Lot 21 (Block 5005); and Lot 22 (Block 5005), see Attachment 1. The site is located in the Iron Bound Section of Newark and is situated between Foundry Street on the east, the former Manufactures Railroad on the west, and Roanoke Avenue on the north. Bordering the southern portion of the site is the New Jersey Turnpike.

Approximately 30 small buildings are situated throughout the complex. The buildings are separated by narrow driveways which have strip-like drains in the middle of the lane. These drains are connected to an industrial sewer line on Roanoke Avenue and receive surface water run-off and industrial discharge from companies in the complex. The complex is easily accessible from numerous locations.

Historically, the Foundry Street Complex has been occupied by a variety of chemical manufacturing industries. One of the first known companies associated with the site was Central Dyestuff and Chemical Company (CDC), a New Jersey Corporation. CDC acquired the property in three different portions from Waldron Brothers Realty Company, Municipal Investment Company, and part of the premises known as Plum Point Lane duly vacated by the City of Newark. CDC manufactured color specialties which included oranges, fast reds, scarlets, browns, chrysoidine blacks, oil soluble colors, and a large variety of colors and dyes used for cakes, varnishes, inks, stains, straw, leather, etc.

On August 13, 1930, Central Dyestuff and Chemical Company merged with Consolidated Color and Chemical Company (CCC). The latter name was retained by the new corporation which continued to operate on site.

In January of 1936, Arkansas Company, Inc., a New York Corporation, executed a three year lease for space in buildings designated as #16, #24, #26, #27, #28, #32 and #35 with CCC. Consolidated Color and Chemical gave Arkansas the sole right and option to purchase the demised property. However, this option expired on October 31, 1938. After executing the lease with Arkansas, CCC changed their name to H.A. Metz & Company Inc., a New Jersey Corporation, on March 2, 1936. H.A. Metz & Company name was changed to Roanoke, Inc., a New Jersey Corporation, on May 24, 1937.

In January, 1939, Roanoke, Inc. sold the property which now consists of Lots 4, 5, 21 and 22 to Chemical Industries, Inc. for a sum of \$10.00.

Prior to the sale of the premises, a ten year lease which became effective February 1, 1939, was negotiated between Arkansas Company, Inc., Chemical Industries, Inc. and Roanoke Inc. Arkansas Company's new lease still contained the right and option to purchase the premises which expired on November 1, 1943. Apparently, Arkansas and Chemical Industries, Inc. had negotiated the sale of the property before the November 1 deadline. The

sale was finalized on December 27, 1943. The Newark Tax Map now designates this property as Lot 5 (Block 5005).

ARKANSAS COMPANY, INC.

Arkansas Company, Inc. (Arkansas Chemical) manufactured textile chemicals at the facility which included chelating agents, dye carriers, emulsifying agents, fire retardants, fungicides, resin finishes and water repellents.

In 1975, Arkansas was issued a Notice of Violation (NOV) by the U.S. EPA, Region II, for failure to implement a Spill Prevention Control and Countermeasure Plan for a 20,000 gallon storage tank containing No. 6 fuel oil. It is not known if any penalties were assessed against Arkansas for the violation.

Arkansas Chemical sold the property (Lot 5) to Galaxy, Inc. on February 23, 1978, but continued to operate on the premises as a tenant. The City of Newark foreclosed upon the property, for unpaid taxes, in September of 1983. Both Arkansas and Galaxy, Inc. subsequently filed for bankruptcy, under Chapter 11, in the United States Bankruptcy Court for the District of New Jersey.

Sometime thereafter, Arkansas Chemical ceased operations at the facility. NJDEP personnel discovered approximately 250 abandoned 55 gallon drums on the property during a site inspection on April 30, 1984. Labels found on the drums indicated that they contained benzene chloride, perchloroethylene, methanol, silane, isophorondiisocyanate, lactic acid and polyethylene glycol. Some of the drums were noted leaking their contents. Oil spillage was discovered on the rear portion of the property where open containers of petroleum products were stored.

The Division of Waste Management (DWM) issued a Directive Letter to Arkansas on September 21, 1984. Arkansas was directed pursuant to the Spill Compensation and Control Act, to immediately initiate remedial measures at the site which included: Securing access onto the site; listing all materials stored on site within fourteen days upon receipt of the directive; and properly removing and disposing of all containers and contaminated soil in accordance with Department regulation.

Howard S. Greenberg, registered agent for Arkansas, informed the NJDEP by letter dated October 3, 1984, that remedial contractors were being sought. A supplemental letter dated October 23, 1984, provided the names of potential contractors which included: Atlantic Remedial Constructors, Inc., Clean Venture, Inc. and Rollins Field Service, Inc. The letter also stated that Elson T. Killian Associates had been hired to oversee cleanup activities. A cleanup proposal was submitted by Clean Venture, Inc. in November, 1984.

Approximately 500 additional drums were discovered in building No. 28 during a subsequent inspection. Many of the drums were labeled for corrosive, flammable and poisonous materials. An unspecified number of five gallon pails were also found in an outdoor shed.



facility on September 19 and November 10, 1989. The sample results indicated that ground water was contaminated with VOCs, B/Ns, PHCs and priority pollutant metals. The concentrations detected exceeded ECRA action levels. However, the contamination appeared to be coming from an off site source.

As a result of potential off site contamination, five additional monitoring wells were installed at Sun Chemical. Ground water samples were collected from the eight monitoring wells on August 23, 1990. These samples contained elevated levels of VOCs, B/Ns, PHCs and priority pollutant metals.

The DWR, Bureau of Ground Water Control recommended that additional background sampling be conducted to verify off site sources of contamination in March of 1990. Recon Systems Inc. in an attempt to verify such sources, investigated the integrity of the drainage system (strip drains) and sewer system. Video inspection of the sewer system revealed that the sewer lines contained numerous cracks and separations between the pipes. The inspection also noted that the strip drains were connected to the sewer system on Sun's property.

On July 17, 1990, four sediment samples and one water sample was collected from catch basins and the sewer system on the property. The samples contained elevated levels of VOCs, B/Ns, organic acids, cyanides, and priority pollutant metals. Recon Systems Inc. investigative findings concluded that contamination could have migrated onto the facility through the drainage system and leaks in the sewer system.

It was also indicated that reoccurring flooding of the drainage system may have distributed past sources of contamination throughout the facility, resulting in the scattered pattern noted on the premises. Furthermore, "ground water contamination appeared to be a regional problem not directly attributable to Sun Chemical".

#### FLEET AUTO ELECTRIC

The western portion of Lot 22 is occupied by Fleet Auto Electric and Automatic Electro-Plating Inc. (AEP). Fleet Auto Electric rebuilds electrical parts (i.e. generators, alternators for cars) in building #29 which is located immediately adjacent, and on the west side of Sun Chemical (See Attachment 2). The company has operated in the building since the early seventies.

#### AUTOMATIC ELECTRO-PLATING CORPORATION

Automatic Electro-Plating (AEP), EPA ID #NJD002445500 conducts an electroplating business in buildings #19, #21 and #22 (See Attachment 2). AEP has occupied these buildings since April, 1971. Tennant Chemical Company once operated in building #21 during the sixties.

The company performs nickel and zinc plating which incorporates two automated methods: RACK (metal parts suspended from racks), building #21, and BARREL (metal parts are placed in a polypropylene barrel) building #22. Both procedures are dipped in the various plating solutions and rinses. AEP

stores their dry chemicals in building #19. The yard south of building #19 is used to store acid carboys.

Several processes are done to prepare the metal parts for plating. The parts are first cleaned with an alkaline solution which is followed by a water rinse. Next, the parts are placed in a mild acid bath for surface activation and once again rinsed with water. From this process, the parts are submerged either in the zinc or nickel solution. The zinc solution consists of zinc chloride, potassium chloride and boric acid. The nickel solution consists of nickel sulfate, nickel chloride and boric acid. After the plating is completed, the parts are rinsed with water a final time and air dried.

Spent plating solutions are discharged from two outlets into the outside drains surrounding the production building. The drains flow to a sewer connection located near the northeast corner of building #21. Prior to discharge, the pH of the effluent is adjusted (neutralized) in house before it is released to the Passaic Valley Sewerage Commission (PVSC) which regulates the discharge under permit #2040-1122. Automatic Electro-Plating's permit is effective until July 14, 1991.

In January of 1986, AEP was determined to be in violation of Sections 307 and 308 of the Clean Water Act, 33 U.S.C. Subsection 1317, and Subsection 1318. A Civil Action Suit (86-0920) was filed by the United States Environmental Protection Agency, Region II. Gerald Borriello, President of AEP, signed a Consent Decree on April 15, 1987 for settlement of the pending actions. A \$100,000 penalty was paid for the violation by Automatic Electro-Plating.

A prospective acquisition of AEP stock by Gerald F. Mahoney and Sennody Volkov in 1989, initiated the Environmental Cleanup Responsibility Act (ECRA) pursuant to N.J.A.C. 7:26-B-1.6 (stock purchase and redemption agreement of controlling share of assets of an industrial establishment). Subsequently, a General Information Submission and Site Evaluation Submission were filed with the Bureau of Environmental Evaluation Cleanup and Responsibility Assessment (BEECRA) on November 30, 1989 and January 10, 1990 respectively. Both submissions were determined to be incomplete by the Industrial Site Evaluation Element (ISE).

The Earth Technology Corporation, consultant to Automatic Electro-Plating, submitted a ECRA Negative Declaration on April 6, 1990, but it was found to be deficient. A revised declaration submitted on April 18, 1990 was waved due to enforcement actions on the adjacent property. No sampling was originally proposed for the facility. However, Mr. Borriello stated during a site inspection on November 7, 1990, that the Department (presumably ECRA) is requiring him to investigate contamination on site through sampling.

#### LOT 6 AND 10, BLOCK 5005

The south-southeast portion of the Foundry Street Complex consists of Lots 6 and 10 (Block 5005). Ashland Chemical Company acquired the property from Lasp Realty, Inc. in June, 1968. The two parcels are referred to as the "West Plant" and lie adjacent to Arkansas Chemical. It should be noted that the Ashland facility is divided in half by the New Jersey Turnpike. The

SUBSTANCES DISCHARGED/ABANDONED:

The following contaminants were detected in sediment samples, soil samples, and surface water samples collected throughout the Foundry Street Complex by the Bureau of Planning and Assessment on October 14, 1988.

VOCs: Acetone, Benzene, 2-Butanone, Carbon Disulfide, Chlorobenzene, Chloroform, 1,1-Dichloroethane, 1,2-Dichloroethane, 1,2-Dichloroethene, Ethylbenzene, Methylene Chloride, 4-Methyl-2-Pentanone, Tetrachloroethene, Toluene, 1,1,1-Trichloroethene, Vinyl Chloride

BNAs: Anthracene, Benzoic Acid, Benzo(a)Anthracene, Benzo(b) Fluoranthene, Benzo(k)Fluoranthene, Benzo (g,h,i) Perylene, Benzo(a)Pyrene, bis (2-Ethylhexyl) Phthalate, Butylbenzylphthalate, 4-Chloroaniline, 1,2 Dichlorobenzene, 1,3 Dichlorobenzene, 1,4 Dichlorobenzene, Dibenzo(a,h)Anthracene, Di-n-Butylphthalate, Di-n-Octylphthalate, 2,4-Dichlorophenol, Fluoranthene, Fluorene, Indeno (1,2,3,-c,d) Pyrene, 2-Methylnaphthalene, Naphthalene, 2-Nitroaniline, Phenanthrene, Phenol, Pyrene, 1,2,4-Trichlorobenzene, 2,4,6-Trichlorophenol

PESTICIDES:

Aldrin, Dieldrin, 4,4' DDT, Arcolor 1248

METALS: Antimony, Arsenic, Barium, Cadmium, Chromium, Copper, Lead, Mercury, Nickel, Silver, Vanadium, Zinc, Cyanide

DESCRIPTION OF SITE CONTAMINATION:

LOT 21 (BLOCK 5005)

Hummel Lanolin Corporation removed a 6,000 gallon underground storage tank, used to store fuel oil from the southwest corner of Lot 21 in 1985. The location of this former tank was a major environmental concern of Hummel Lanolin. As a result of this concern, Dames & Moore, consultants for Hummel Lanolin, installed six soil borings in the area of the former tank. Soil samples were collected at six inches above the saturation zone (approximately 5.0 - 5.5 feet in depth) and six inches below the base of the tank (approximately 10.0 - 10.5 feet in depth). It should be noted that ground water was encountered at a depth of five and one half feet.

All twelve samples were found to have petroleum hydrocarbons ranging in concentrations from 16 ppm to 1,720 ppm. Three samples analyzed for base neutral compounds revealed the presence of bis (2-ethylhexyl) phthalate, di-n-butyl phthalate, and naphthalene. Other base neutral compounds were detected but could not be definitively identified. The two samples containing the highest concentrations of petroleum hydrocarbons were further analyzed to determine their constituents (fuel oil or wool grease). High concentrations of wool grease were detected in the sample taken from beneath the tank. The other sample, which was taken above the saturation zone revealed higher levels of fuel oil.

Six additional soil borings were made in the area of the former tank in March, 1987. The soil samples collected from these borings contained VOCs (i.e. benzene, toluene, 2-butanone, trichloroethane, 1,2-dichloropropane, xylene) semi volatiles (i.e. naphthalene, fluoranthene, pyrene, chrysene, benzo(a)pyrene, phenanthrene), PHCs, and metals (i.e. cadmium, chromium, copper, lead, zinc).

Dames & Moore installed four monitoring wells (MW) in the vicinity of the former tank in July, 1987 to determine if ground water had been contaminated. During the installment of MW-1, a sludge like material with a septic odor, was encountered. On August 13, 1987, a soil boring was made approximately one foot from MW-1. The sludge material was not detected in the soil sample taken from the boring, however, a septic odor persisted. Contaminants detected in the sample included VOCs, B/Ns, pesticides and metals (arsenic, cadmium, lead and zinc).

A ground water sample was extracted from MW-2 on August 17, 1987. No significant levels (less than 1 ppm) of petroleum hydrocarbons and oil/grease were detected in the sample. It should be noted that no analysis for priority pollutants was performed on the sample. The presence of VOCs, B/Ns, and metals in soil samples would suggest possible leaching of these contaminants into the underlying ground water.

To further delineate the source of the sludge material, a sediment sample was collected from the base of a manhole located 60 feet from the facility on the southern portion of the property. The sediment sample contained VOCs, PHCs, and metals. These are the same types of contaminants present in the soil sample taken from the boring next to MW-1.

A composite soil sample was obtained from beneath a floor drain in the process building located near the area where the sludge material was discovered outside. The sample was taken at a depth of 20.5 - 26.3 inches and 26.1 - 32.5 inches. The sample contained VOCs, B/Ns, and metals below ECRA action level. The floor drains were determined not to be a source of the sludge through the concentrations detected in the soil sample.

In October, 1988, Dames & Moore collected a sediment sample (WC-1) and water sample (WC-2) from the drainage basin situated on the north side of the process building. The sediment sample contained methylene chloride (11,000 ppb), toluene (6,100 ppb), five B/Ns below method detection limits, and metals (i.e. cadmium, copper at 1,096 ppm, lead at 1,044 ppm, selenium, zinc at 3,746 ppm). The water sample contained low levels of cadmium and lead. However, both samples had elevated levels of total petroleum hydrocarbons.

LOT 22 (BLOCK 5005)

A preliminary ECRA investigation was performed at the Sun Chemical facility by Recon Systems, Inc. on October 14, 1986. Three (3) samples consisting of one soil sample from an unpaved area adjacent to a solid waste dumpster, one sediment sample from a drain located in the drive way south and adjacent to Sun, and one swipe sample of a oily substance on a boiler room floor were taken during the sampling episode.

The soil and sediment samples exceeded the Bureau of Industrial Site Evaluation cleanup levels for base neutral compounds and petroleum hydrocarbons. Base neutral compounds detected included naphthalene, 2-methylnaphthalene, di-n-butyl phthalate, bis (2-ethylhexyl) phthalate and unknown brominated compounds. Metals (i.e. antimony, arsenic, cadmium, chromium, copper, lead, mercury, nickel and zinc) were also present in both samples. PCBs were detected in the soil and swipe sample.

In August, 1989, three monitoring wells were installed at Sun Chemical to examine ground water quality. Two of the three wells (MW-1, MW-3) were placed on the west and north side of the facility respectively. While MW-2 was placed to the south of the facility. Ground water was determined to flow in a southeast direction and was reported to be influenced by tidal action.

Ground water samples were collected from the monitoring wells on September 19 and November 10, 1989. The samples from all three wells exceeded ECRA action levels for total B/Ns and VOCs. However, levels detected in MW-2 were lower than those levels detected in the other two monitoring wells (MW-1, MW-3). In addition MW-3 also exceeded action levels for PHCs, PCBs, and metals (i.e. arsenic, cadmium, lead, mercury, zinc).

Recon Systems, Inc. collected four (4) sediment samples and one water sample from Sun's sewer system on July 17, 1990. Sediment sample #1 was collected from the drainage system (strip drain) located in the driveway separating Sun and Arkansas Chemical where a second drain from Arkansas property connects into the first drain. The sample contained elevated levels for volatile organic compounds (VOC), base neutral compounds (B/N), organic acids, cyanide, phenol and priority pollutant metals (i.e. lead, mercury).

RESPONSIBLE PARTY:

Automatic Electro-Plating Corporation (Duns #00-244-5500)  
185 Foundry Street  
Newark, NJ 07105-4208  
(201) 589-0344

Block 5005, Lot 22

Registered Agent:  
J.J. Longley  
426 Springfield Avenue  
Summit, NJ 07901

Corporate Status:  
Active; SIC 3471; Electro-Plating

Financial Status:  
Sales \$1,000,000 latest year 1989 (Dun & Bradstreet)

Principals:  
President - Borriello, Gerald  
260 Knoll Drive  
Block: 2505 Lot: 7 (Park Ridge Borough, Bergen County)

Assessment:  
\$136,900 Land  
\$221,400 Improvements  
\$358,300 Total Assessment

CONCLUSIONS AND RECOMMENDATIONS:

Historically operations at the Foundry Street Complex have contributed to contamination through the handling of hazardous substances and contributory operations. Ellis R. Meeker's book entitled "New Jersey, A Historical, Commercial and Industrial Review", Commonwealth Publishing Company, 1906, indicates that Central Dyestuff and Chemical Company manufactured tar colors at their extensive plant at Plum Point Lane. This is substantiated by information obtained through a title and deed search. Part of the property making up the Foundry Street Complex was formerly known as Plum Point Lane.

According to the Encyclopedia of Chemical Technology products recovered from the fractional distillation of coal tar have been the traditional raw materials for the dye industry. Among the most important are benzene, toluene, xylene, naphthalene, anthracene, acenaphthene, pyrene, pyridine, carbozal, phenol and cresol. The reference further states that dye companies expanded their activities into the pharmaceutical field. Pharmaceuticals such as sulfa drugs were derived from compounds already in use as dye intermediates.

H.A. Metz & Company, Inc., successors to Consolidated Color and Chemical Company by virtue of name change, was identified to have once manufactured drugs at the Foundry Street Complex. This information was obtained from the Industrial Directory of New Jersey (1931) and Sanborn Fire Insurance Maps.

Hummel Lanolin Corporation and Sun Chemical Company have investigated their facilities located within the Foundry Street Complex for potential sources of contamination pursuant to the Environmental Cleanup Responsibility Act (ECRA). Extensive files are maintained relative to these activities with ECRA.

NOTE: ECRA File Numbers are Provided on Page 50

Ground water samples taken from eight monitoring wells installed throughout the Sun Chemical facility contained elevated levels of volatile organic compounds (VOCs), base neutral compounds (B/Ns), petroleum hydrocarbons (PHCs) and priority pollutant metals. Recon Systems Inc. determined that the flow of ground water in the vicinity of the facility is from the south in a radial direction. Arkansas Chemical and Ashland Chemical Company's Industrial Chemical and Solvents Division are situated upgradient of Sun Chemical.

Widespread contamination has been documented throughout the "West Plant" of Ashland's Industrial Chemical and Solvent Division. The west plant lies approximately 300 feet south of Sun Chemical. Contamination on this property has resulted from numerous spills, leaks, and poor house keeping practices associated with the 200 Series tank farm, drumming warehouse, and truck and rail car loading/unloading manifolds. The 200 Series tank farm was used to store products such as mineral spirits, naphthalene, plasticizer, fuel oil, toluene and xylene. In addition, halogenated VOCs (i.e. 1,1-dichloroethane, 1,1-trichloroethane, tetrachloroethane), aromatic VOCs (i.e. benzene, toluene, xylene) and petroleum distillates have been detected in ground water and soil samples collected from the West Plant. The highest

concentrations have been detected in the area of the former 200 Series tank farm. It should be noted that most of the West Plant is not paved.

Arkansas Chemical Company occupied the adjoining property to the south of Sun for approximately 47 years. It should be noted that Arkansas vacated the premises in 1984. The two companies are separated by a narrow driveway. Numerous storage tanks were maintained in the rear south-southwest corner of the property (Lot 5), adjacent to building #28. Arkansas used these tanks to store fuel oil, sulfuric acid, caustic soda, mineral oil, naptha and other products. In 1981, a NJDEP, Division of Hazard Management representative noted weep holes in a caustic tank. Spillage stained the ground below the tank and other tanks in the area.

In October, 1988, two soil samples were taken from the southwest corner of the facility behind the former tank house. Both samples were obtained from the same boring. The shallow sample (S-2) contained high concentrations of VOCs (i.e. xylene, toluene, tetrachloroethylene, chlorobenzene, ethylbenzene) and semi volatiles (i.e. napthalene, 2-methylnapthalene). Only tetrachloroethylene was present in the deep sample (S-3). This suggests that the contamination is the result of surface spillage which has not deeply penetrated into the ground. Spillage from petroleum products was observed on the ground in the rear (west side) of the property during an inspection in 1984. In addition naptha was stored in a tank near the sample location. Napthalene and 2-methylnapthalene were detected in the shallow soil sample. Spillage or leakage from the tank could have migrated from the tank to this area.

It should be noted that the drainage system throughout the Foundry Street Complex is a major source of contamination. Sediment and surface water samples collected from the drainage system in October, 1988, contained high concentrations of VOCs, B/Ns, PHCs, PCBs and priority pollutant metals. The drainage system essentially consists of troughs embedded in the driveways which are connected to sewerlines. A site inspection conducted at the Foundry Street Complex on November 7, 1990, revealed that many sections of the drains had collapsed or were broken. Water observed in the drains had a petroleum sheen on its surface and a heavy residue existed on the bottom. It was also reported that the drains would frequently flood during periods of rain. Any contamination in the drains could be redistributed over other areas covered by the flood waters.

The drainage system connects to sewerlines located on the south side and to the northwest of Sun Chemical. The sewerline on the south side, transverses underneath the Sun facility. Both sewerlines are connected to an industrial sewerline on Norpak's property to the north. The industrial sewerline is connected to a city sewer on Roanoke Avenue. Four sediment samples were collected from the drainage system and sewerlines surrounding Sun Chemical on July 17, 1990. These samples contained elevated levels of VOCs, B/Ns, organic acids, unknown semi volatiles, and priority pollutant metals.

Recon Systems, Inc. video inspection of the sewerlines on the premises of Sun Chemical revealed numerous cracks and separations between the pipes. Any contamination entering the sewerline could escape through these openings into the surrounding soil.



Drains from Arkansas Chemical were discovered to flow directly from Building #26, #27 and #28 (See Attachment 4). The drains are connected to the drainage system in the driveway on the north side of the facility. Herman G. Wieland, Chief Chemist of Arkansas, stated in a Sewer Connection Application dated October 27, 1980 that the plant's effluent is neutralized in an outside tank and discharged into "city storm sewers via covered ditches". Waste water samples taken from Arkansas Chemical in October, 1981 contained trace concentrations of arsenic, cadmium, chromium, copper, lead, mercury, nickel, and zinc. Mercury was detected in effluent samples taken in June and July, 1981. These contaminants have been detected in sediment samples taken from the drains throughout the Foundry Street Complex.

Division of Hazard Management personnel noted in 1981, that spillage from the process building (#28) could flow unobstructed into strip drains outside. It was also indicated that drains located in the shipping building (#27) flowed directly off the premises. In December, 1986, NJDEP personnel observed powder and resin on the floors of the process building. In addition, numerous fiber drums and lines on reactor/process vessels were leaking their contents. The roof was also noted to be leaking which could wash spillage into floor drains that flowed into the drainage system. Many of the products removed from Arkansas Chemical by the EPA were base neutral compounds, acids, cyanides, peroxides, flammables, halogenated organics, oxidizers and organics.

Automatic Electro-Plating Corporation (AEP) has operated an electroplating business on the western portion of Lot 22, adjacent to Sun Chemical, since 1972. The drainage system borders the facility on its north, west and south side, and receives point source discharge and surface water run-off from AEP. A sewerline on the east side is connected to a sanitary source at the facility. Elevated levels of VOCs and priority pollutant metals were detected in a sediment sample (Sediment #2) taken from a catch basin where the two sewerlines connect in July, 1990.

A flow diagram submitted by AEP to the Passaic Valley Sewerage Commission in January, 1989 shows process lines from buildings #21 and #22 discharge into the drain on the north side. High concentrations of arsenic, cadmium, chromium, copper, lead, mercury, silver and zinc were detected in a surface water sample (SW-4) taken from this drain on October 14, 1988.

This drain and the noted sewerline connect to one another at a catch basin situated near the corner of building #21. Elevated levels of VOCs, B/Ns, PCBs, organic acids, unknown semi volatile compounds and priority pollutant metals (i.e. cadmium, chromium, copper, lead, nickel, zinc) were detected in a sediment sample (Sediment #3) collected from this catch basin in July, 1990.

In January, 1989 Gerald Borriello, President of AEP, informed the Passaic Valley Sewerage Commission that his company does not discharge any cadmium, lead, silver or cyanide into the sewage system. Automatic Electro-Plating's ECRA General Information Submission (GIS) states that only nickel and zinc plating are conducted on site. These metals have been detected in sediment samples collected from the drainage system.

According to the Division of Environmental Quality (DEQ) Right to Know Survey dated November 10, 1988, Automatic Electro-Plating Corporation used materials containing chromium, copper, nickel, silver, zinc and cyanide. The GIS indicated that dry chemicals are stored in building #19. Samples SW-3 and SED-4 were obtained from the drain located on the west side of buildings #21 and #22, and adjacent to the chemical storage area on October 14, 1988. High concentrations of metals detected in these two samples suggest that run-off may be transporting spilled materials from the storage area into the drain.

Records obtained from the PVSC revealed that AEP once conducted chrome electro-plating (see file copy of AEP General Information Sewer Connection Application, 1980). An effluent sample taken on December 12, 1979, during "usual electro-plating" operations contained arsenic, cadmium, chromium, copper, lead, nickel and zinc.

In 1982, AEP informed the DWR that they are experimenting with nontoxic products such as cyanide free plating solutions, and chromium free passivities to reduce the discharge of chromium. Subsequently, AEP consistently failed to meet electro-plating discharge standards which initiated enforcement actions by the USEPA in 1986.

Another potential source of contamination may have originated from the Polychrome Corporation, Cellomer Division. Sun Chemical stated in their General Information Submission that Cellomer occupied the premises before 1967. Cellomer's address is listed as 185 Foundry Street in New Jersey Industrial Directories from 1964 through 1966. There is no information concerning the company's activities at the Foundry Street Complex.

In subsequent directories, the address was listed as 46 Albert Street, Newark. Cellomer manufactures alkyd resins at this location. Some products used include vegetable oils, polyols, phthalic anhydride, aliphatic and aromatic solvents. The company submitted to the PVSC a base line monitoring report (BMR) for process water samples taken during normal operations in June, 1988. The samples contained detectable levels of benzene, benzoic acid, methylene chloride, toluene, xylene, bis (2-ethylhexyl) phthalate, and di-n-butyl phthalate. These substances have been detected in soil and sediment samples taken from Sun Chemical.

In 1989, O'Brien & Gere Engineering, Inc. was retained to address compliance with waste water discharge regulations. A compliance monitoring report indicated that Cellomers regulated waste stream exceeded maximum concentration limits for toluene, ethylbenzene, and phenol. In addition, toluene and bis (2 ethylhexyl) phthalate were detected in the plant's effluent. O'Brien & Gere concluded that the company was not consistently complying with standards for phenol, bis (2 ethylhexyl) phthalate, ethyl benzene and toluene. These substances have been detected in ground water, surface water and sediment samples collected from the drains around Sun Chemical and Automatic Electro-Plating. Neither Sun Chemical or Automatic Electro-Plating are known to utilize these substances, therefore Polychrome's operation at Foundry Street are a likely source of this contamination. Polychrome's Cellomer Division name was changed to Reichhold Chemical Inc. in 1989.

Avon Drum Corporation has operated a drum brokerage on the northern portion of Lot 4, adjacent to Roanoke Avenue and west of the former Hummel Lanolin facility for approximately 20 years. Historical aerial photographs (EPI-IRC-6571, 6572, 6573) taken on September 6, 1978, revealed extensive drum storage along Roanoke Avenue where Avon Drum operates. The area appeared to be heavily stained.

High concentrations of VOCs (i.e. xylene, tetrachloroethene, toluene, ethylbenzene), semi volatiles (i.e. phenanthrene, di-n-butyl phthalate, fluoranthene, pyrene, benzo(a)anthracene), PCBs, and priority pollutant metals were detected in soil samples (S-12, S-13, S-14) collected from the facility on October 14, 1988. Two soil samples (S-10, S-11) taken at the perimeter of the facility contained significantly fewer contaminants at lower concentrations. This implies that contamination is directly associated with site operations (i.e. drum storage). Representatives from the Bureau of Compliance and Technical Services observed spillage throughout the facility on November 7, 1990. During this inspection, a solvent odor was encountered. Two operators at the Foundry Street Complex also stated that the company washes drums out on the premises. Consequently any remaining residues in the drums would be allowed to discharge onto the ground. There is no protective barrier (i.e. concrete, asphalt) at the facility.

Berg Chemical Co. and Conus Chemical conducted a chemical repackaging and distribution operation in buildings #5, #5A and #7 located on the west side of Lot 4 adjacent to the railroad tracks. Products handled at the facility included acids, alcohols, solvents, petroleum products, corrosives, reactives and flammables. A large inventory of these products were stored inside and outside of the buildings. The outside storage area lacked adequate spill prevention structures to prevent spillage from seeping into the ground. High levels of chloroform, 1,2-dichloroethene, trichloroethylene, tetrachloroethylene, 2-methylnaphthalene, benzoic acid, phenthane, di-n-butyl phthalate, pyrene and butyl benzyl phthalate were detected in a soil sample (S-9) collected near the drum storage area on October 14, 1988.

An EPA inventory taken from drums located in the outside storage area included trichloroethylene, chloroethylene, naptha distillate, benzyl chloride, toluene and petroleum ether. Some of these substances were detected in the soil sample. In February, 1990 NJDEP, DHWM personnel reported that various spills of hazardous substances existed outside of the facility. It was also noted that soils were stained along the western portion (exterior) of Conus.

NJDEP representatives observed spillage throughout the inside of building #5 during a presampling site inspection in October, 1988. Conus stored a variety of hazardous substances in 55 gallon drums, fiber drums, fiber bags, small containers and above ground storage tanks. Spillage was also observed inside on subsequent inspections. Floor drains in building #5 were determined to curve towards the east side of the facility. This suggests that the drains may be connected to the drainage system location in the driveway outside. Any spillage resulting from repackaging could flow or be washed into the floor drains.

High concentrations of VOC (i.e. methylene chloride, 1,1-dichloroethene, 1,2-dichloroethene, 1,2-dichloroethane, 2-butanone, 1,1,1-trichloroethene, xylene, trichloroethylene, benzene, tetrachloroethylene, toluene, chlorobenzene), semi volatile (i.e. 1,2-dichlorobenzene, naphthalene, 2-methylnaphthalene, phenanthrene, fluorene, flouranthene, pyrene, butylbenzyl phthalate, bis (2-ethylhexyl) phthalate) pesticides, PCBs and priority pollutant metals were detected in a sediment sample collected from the drain situated between Conus (Building #5) and RFE Industries (Building #1) on October 14, 1988.

An inventory of hazardous materials found in building #5 included: Petroleum product residue, naphthalene, kerosene, mineral spirits, n-butyl lactate, dry cleaning solution to name a few. Other potential sources of contamination detected on the west-northwest side of Lot 4 may have originated from operations conducted by Coronet Chemical Co., Grignard Chemical Co. Inc., Honig Chemical and Processing Co., Hummel Chemical, RFE Industries, Morrel Truck Services, and County Lift Truck Service.

Grignard Chemical Co. manufactured lubricating oils, cutting oils, cleaners and preservatives in building #7. This consisted of blending materials such as petroleum oil, alkaline additives, chlorinated hydrocarbons and diester compounds with non-hazardous components. Grignard's "Site Evaluation Submission" dated August 21, 1990 included a Hazardous Substance/Waste Inventory List (Appendix D). The list notes that Grignard used dichlorobenzene, dichloromethane, 1,1,1-trichloroethane and petroleum distillates. High concentrations of dichlorobenzene, 1,1,1-trichloroethane, and B/Ns were detected in sediment sample (SED-5) collected from the drain outside building #5 on October 14, 1988. Petroleum distillates with high molecular weights will be present in the base neutral fraction. Such compounds might be related to B/Ns contamination detected in the ditch.

The company has not manifested any hazardous waste from their facility between 1980 and 1989. Grignard reportedly received a shipment of PCB contaminated transformer oil from G&S Motor Equipment Company in 1981. According to Grignard's response to a "Request for Information" dated January 8, 1991, indicates they are no way related to G&S Motor Equipment Company. High concentrations of PCBs (Arcolor-1248) was detected in the previously noted sediment sample.

Another potential source of contamination is Coronet Chemical Company. The company reclaimed naphthalene from spent teflon etching solutions in building #9 during the early eighties. Waste generated from the reclamation process was disposed in a dumpster. Leaking drums of naphthalene were observed during RCRA inspections at the facility. The location of the dumpster and leaking drums are not known. However, discharges from either source could seep into the ground or migrate into the drain on the west side of Coronet Chemical.

Coronet Chemical was also developing a sodium dispersion to destroy PCBs. However, it is not known if the company inventory of hazardous substance included PCBs. It should be noted that high concentrations of naphthalene and PCBs were detected in sediment sample (SED-5) collected on October 14, 1988. Coronet Chemical was evicted from the facility in 1986. Numerous drums containing metallic sodium were abandoned in building #4. This

building was used for storage. Inspection of the building in July, 1987 revealed that one of the drums had reacted.

Grignard identified Honig Chemical and Processing Co. as having operated in building #7 and #8 during the early seventies (1970-1975). This information was stated in Grignard's ECRA Site Evaluation Submission. In October, 1988 Gerald Berriello of Automatic Electro-Plating stated that Honig operated in a building next to Conus Chemical which exploded. It should be noted that building #13 was destroyed by an explosion in 1962. This is stated in a Newark, Division of Inspections Violation Report.

Honig manufactures organic chemicals at a facility located at 414 Wilson Avenue, Newark, NJ. According to the Division of Environmental Quality, Right to Know Survey, Honig Chemical uses the following hazardous substances: Arsenic trioxide, barium nitrate, benzene, chloroform, dichloromethane, lead nitrate, mercury chloride, mercury acetate, mercury metal, petroleum spirits, pyridine, silver nitrate and toluene. High concentrations of arsenic, barium, lead, mercury and silver were present in a soil sample (S-6). The sample was taken on the west side of building #15 where it was once attached to building #13. High concentrations of acetone, barium, benzene, chloroform, toluene and pyrene were detected in sediment sample (SED-5) collected from the drain between building #1 and building #5.

Hummel Chemical is also believed to have operated on the west side of the Foundry Street Complex according to Howie Levy of Fleet Auto Electric. This information was obtained during a presampling site inspection in October, 1988.

Hummel Chemical Co. Inc. address is listed as 185 Foundry Street in New Jersey Industrial Directories from 1966-1970. A "Request for Information" was issued to Hummel Croton Inc. (HCI), successors of Hummel Chemical, on December 7, 1990. HCI's response dated December 28, 1990 verified that Hummel Chemical operated at the Foundry Street Complex until April of 1968.

The company supplied chemicals to the pyrotechnic industry. Most of the items handled were purchased from other companies in truckloads, rail car, and less than truckload quantities. It should be noted that only the west side of the Foundry Street Complex is serviced by a rail siding. HCI claims that most of the chemicals were shipped out in their original container without being opened. Hummel Chemical also grinded nitrates on the premises. Such operations at the HCI facility in South Plainfield has contributed to soil contamination. Airborne particulate generated by the grinding process would accumulate around ventilators on the roof. Subsequently particulate would wash off the roof from rain and onto the surrounding grounds.

Soil samples (S-7, S-8) taken on the west side of building #5 and #7 contained high concentrations of antimony, cadmium, chromium, copper, lead, mercury, nickel and zinc. HCI indicated that Hummel Chemical handled antimony sulfide and zirconium powder. They may have also handled copper oxide, copper oxychloride, lead chromate, lead dioxide, lead oxide, zinc dust, zinc oxide at the site in Newark. These products are used at the South Plainfield facility.

Hummel Chemical was also a producer of Class III organic chemicals at the Foundry Street Complex according to a USEPA publication entitled "Dioxins" (EPA 600/2-80/197) November, 1980. These organic chemicals are precursor of dioxins. Compounds identified included 2,4-dinitrophenoxyethanol, 3,5-dinitrosalicylic acid, hexachlorobenzene and picric acid. On October 14, 1988, four soil samples were collected from the Foundry Street Complex and analyzed for the 2, 3, 7, 8 TCDD dioxin isomer. However, none of these samples were taken from areas where Hummel Chemical is believed to have operated.

The ground in a small yard, approximately 50 x 20 feet, situated between Morrel Truck Service (Building #9) and County Lift Truck Service (Building #14) was saturated with oil during a site inspection by the Bureau of Compliance and Technical Services (BCTS) Special Investigation Section personnel on November 7, 1990. In addition, there was evidence of a recent spill where speedy dry had been applied. Spillage was also observed around the drain in the driveway which separates the two facilities from Conus Chemical. The yard contained an assortment of oily/greasy truck parts (i.e. engines, rears, transmissions). These parts were laying directly on the ground without any type of barrier. It should be noted that Morrel repairs trucks and County Lift operates a forklift rental business. Spillage in the yard can penetrate underlying soils or be washed into the drain when it rains.

RFE Industries occupies building #1 which abuts Roanoke Avenue on its north side. On November 7, 1990 approximately ten 55 gallon drums were observed by BCTS personnel in the driveway outside of building #1. Upon closer inspection of the drums, it was discovered that some of the drums had been turned over to allow any remaining contents to drain out. The contents of these drums flowed into a large pool of water in the driveway. The drums were marked "Proprietary Solvent Mix #100" contained denatured ethyl alcohol. Such practice by RFE Industries has contributed to on-site contamination. Other types of materials handled are unknown.

C.W.C. Industries, Inc. stored raw materials (i.e. isopropanol, methyl ethyl ketone, toluene, V.M.P. naptha, methanol) and process residues in a small fenced yard located adjacent to the south side of building #17 and the west side of building #18. On November 7, 1990 staining was observed on the concrete throughout the yard and on the east side of building #18. The concrete in the yard contained many fractures. Any spilled or leaking substance could penetrate the underlying soil through the fractures or migrate into a drain located outside the fence. No diking exists around the storage yard.

High levels of VOCs (i.e. 1,1-dichloroethane, 1,2-dichloroethane, trichloroethylene, benzene, 4-methyl-2-pentanone, toluene, chlorobenzene) were present in a surface water sample collected from the south side of building #17 on October 14, 1988. An active flow was noted in the drain during the sampling. C.W.C. uses toluene. The company applies solvent based surface coatings to polyesters. It is not known if any floor drains are connected to the drainage system or if process effluents is discharged into the drain.

Contamination (i.e. VOCs, B/Ns, priority pollutant metals) detected on the property of Hummel Lanolin Corporation (HLC) may have originated from two sources. An industrial sewer line runs underneath the property before connecting to a city sewerline on Roanoke Avenue. The industrial sewer receives discharge and run-off from the Foundry Street Complex. In July, 1987, a black sludge-like material with a septic odor was encountered during the installation of monitoring wells near the sewerline. The sludge material contained VOCs, PHCs, and metals. A sediment sample collected from a manhole on the sewerline, located upgradient of the facility, contained VOCs, PHCs, and metals. Similar contaminants (i.e. VOCs, PHCs, metals) were present in a sludge sample taken from a basin on the north side of HLC process building. The sludge had back flowed into the basin from the industrial sewerline. It should be noted that the basin is located downgradient of where contamination was detected. Priority pollutant metals (i.e. cadmium, chromium, copper, lead, nickel, zinc) detected in the sludge are used by Automatic Electro-Plating located upgradient of HLC.

Dames & Moore, consultants for HLC, determined that ground water in the vicinity of the former underground storage tank flowed in a east-southeast direction in July, 1987. Soil borings made in the vicinity of the tank contained elevated levels of B/Ns (i.e. naphthalene, fluoranthene, chrysene, pyrene, benzo(a)pyrene, phenanthrene). High concentrations of base neutral compounds were detected in five soil samples collected from Avon Drum on October 14, 1988. Avon Drum is located adjacent and hydraulically upgradient of Hummel Lanolin Corporation. HLC did not use any VOCs, B/Ns, or priority pollutant metals in their operations.

Kem Realty purchased Lot 4 in May, 1962. Anthony A. Coraci, Vincent J. Coraci and Mary Coraci were the incorporators of Kem according to the Certificate of Incorporation. A deed between Kem Realty and Hummel Lanolin dated February 28, 1964, identified Vincent Coraci as the President of Kem.

In April, 1976, Kem Realty merged with several companies including Norpak Corporation to form Torco Investment Corporation. Torco's name was subsequently changed to Norpak Corporation by a Certificate of Amendment to a Certificate of Incorporation. Norpak's and Torco Investment Corporation's address are both listed as 70 Blanchard Street, Newark.

By Certificate of Merger dated December 31, 1980, Norpak merged with Norpak Specialties Corporation, Leeds Enterprises, and Abar International Corporation forming ACC Transitional Investing Corporation. Anthony A. Coraci is listed as the registered agent for Norpak Specialties, Leeds, and Abar. A Certificate of Incorporation for ACC Transitional Investing Corporation identifies Anthony A. Coraci, Vincent J. Coraci and Mary Coraci as the first Board of Directors.

ACC conveyed Lot 4 to Norpak on November 11, 1981. A.A. Coraci is currently the President of Norpak Corporation, 70 Blanchard Street, Newark, New Jersey. Therefore, Norpak Corporation, Anthony A. Coraci, Vincent J. Coraci and Mary Coraci have owned Lot 4 since 1962 and subsequently leased out space in buildings on the premises. Numerous discharges have occurred on the property as a result of tenants on site. Norpak and its officers have not made any attempts to remediate contamination on site.

The City of Newark, Division of Inspections issued a Certificate of Occupancy to Essex Chemical for 185 Foundry Street on November 7, 1971. Peter Chan of C.W.C. Industries stated that Essex Chemical once operated in building #17 during a presampling inspection on October 7, 1988. Essex Chemical manufactures inorganic chemicals at a facility on Doremus Avenue. The Division of Environmental Quality, Right to Know Survey indicated that Essex Industrial Chemical uses: Acetone, chloroform, chromium oxide, chromium and compounds, lead nitrate, lead and compounds, and silver nitrate. These substances have been detected in a sediment sample (SED-5) collected from the drain outside of building #5.

ABC Demolition Company was evicted from building #15 by Norpak in October, 1989. The company renovated old buildings and disposed debris from their projects on the property. On November 2, 1989, approximately 13 x 55 gallon drums were observed around the exterior of building #15. Subsequent inspection of the interior of the building discovered additional drums. The Bureau of Compliance and Technical Services, Special Investigation Section determined through their investigation that Norpak, the property owner, was the only viable responsible party (Norpak/ABC Demolition file).

Ace Chemical Corporation was identified as having operated at the Foundry Street Complex according to a Newark, Department of Health and Welfare, Division of Inspections list of "Hazardous Waste Addresses" dated March 12, 1979. Apparently, no certificate of occupancy was issued for this operation by the City of Newark. No other information is known about the company's operations at the Foundry Street Complex.

Tennant Chemical Corporation and Weston Chemical Corporation were also identified as site operators through "Application for Building Permits" issued by the City of Newark. Both companies manufactured chemicals. No other information is known about their operations. Arkansas Company, Inc., Central Dyestuff and Chemical Company, Chemical Industries, Inc., Consolidated Color and Chemical Company, Coronet Chemical Company, Galaxy Inc., H.A. Metz Company, Inc., Ohmlac Paint and Refinishing Company, Tenant Chemical Corporation, and Weston Chemical Corporation have been determined to be dissolved.

Ashland Chemical Company, Automatic Electro-Plating Corporation, Avon Drum Corporation, Berg Chemical Company, Inc., C.W.C. Industries, Inc., Conus Chemical Company, Inc., County Lift Truck Service, Morrel Truck Service, and RFE Industries have been identified as primary responsible parties. The City of Newark, Foundry Street Corporation, Norpak Corporation, and Torco Investment Corporation have also been identified as primary responsible parties for being the owners of the contaminated property located on Lots 4, 5, and 22 (Block 5005).

Essex Chemical Company, Fleet Auto Electric, Grignard Chemical Company, Inc., Honig Chemical and Processing Corporation, Hummel Croton Inc., and Reichhold Chemical Company are potential responsible parties. These companies once operated at the Foundry Street Complex and used substances similar to those detected on site. However only limited or no information exists concerning their activities at the subject site.



Ashland Chemical Company (Case #88695), Hummell Lanolin Corporation (Case #86732) and Sun Chemical Company (Case #86960) have initiated actions to investigate and remediate contamination detected at their facilities pursuant to the Environmental Cleanup Responsibility Act (ECRA). Other ECRA investigations at the Foundry Street Complex include: Automatic Electro-Plating Corporation (Case #85708), Berg Chemical Company, Inc. (Case #90289), C.W.C. Industries, Inc. (Case #90598), Conus Chemical Company, Inc. (Case #90217), Grignard Chemical Company, Inc. (Case #90624).

It is recommended that information provided in this report should be used as a tool to assist in the evaluation of ongoing ECRA investigations (i.e. Berg Chemical, CWC Industries, Inc., Conus Chemical, Grignard Co., Inc.). This may be valuable in determining sampling locations and sampling plans at the noted facilities.

Site investigations conducted by Sun Chemical and Hummel Lanolin Corporation have indicated that ground water is contaminated at the Foundry Street Complex. Therefore all responsible parties and potential responsible parties identified in this investigation should be held jointly and severely liable for contamination of ground water pursuant to the Spill Compensation and Control Act. Their handling of hazardous substances and contributory operations (i.e. storage, processing) have contributed to contamination as noted in this report. It is recommended that an Administrative Consent Order be drafted and issued to the identified responsible parties to address the ground water contamination.

Recovery of administrative costs charged to this case (Project Activity Code JNK and JNM) should be an objective of Department actions. Contact this bureau regarding information or questions on the subject case file.

INVESTIGATOR:

Paul Smith  
Environmental Specialist  
NJDEP-Division of Hazardous Waste Management  
Bureau of Compliance and Technical Services  
Special Investigations Section  
401 East State Street  
Trenton, NJ 08625  
(609) 633-0700

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PASADILLA VALLEY WASTE TREATMENT PLANT - HEAVY METAL SOURCE DETERMINATION  
 PHASE II INDUSTRIAL CONTRIBUTION  
 SUB-AREA 0

PAGE 2

CUMULATIVE NO.	NAME AND ADDRESS OF INDUSTRY	FLOW MOD	TOTAL CADMIUM LBS/DAY (MG/L)	TOTAL CHROMIUM LBS/DAY (MG/L)	TOTAL COPPER LBS/DAY (MG/L)	TOTAL LEAD LBS/DAY (MG/L)	TOTAL NICKEL LBS/DAY (MG/L)	TOTAL ZINC LBS/DAY (MG/L)	TOTAL ARSENIC LBS/DAY (MG/L)	TOTAL MERCURY LBS/DAY (MG/L)
980	ALIAS REFINEMENT INC. 142 LOCKWOOD ST. NEWARK	0.0220 ( 0.077 )	0.014 ( 0.077 )	0.338 ( 1.840 )	0.066 ( 0.358 )	0.782 ( 4.260 )	0.136 ( 0.742 )	0.027 ( 0.147 )	0.001 ( 0.007 )	0.0003 ( 0.001 )
995	AUTOMATIC PLATING INC. 185 FOUNDRY ST. NEWARK	0.0420 ( 0.064 )	0.022 ( 0.064 )	6.690 ( 19.100 )	0.184 ( 0.525 )	0.033 ( 0.095 )	0.178 ( 0.508 )	12.190 ( 34.800 )	0.000 ( 0.001 )	0.0009 ( 0.002 )
1000	AUTOMATIC PLATING METHODS INC. 347 FERRY ST. NEWARK	0.0820 ( 5.160 )	5.529 ( 5.160 )	4.384 ( 6.410 )	3.358 ( 4.710 )	0.193 ( 0.282 )	1.306 ( 1.710 )	29.680 ( 43.400 )	0.002 ( 0.003 )	0.0005 ( 0.000 )
1010	BARBER PHOTOGRAPHIC CO. 378 SIXTH AVE. NEWARK	0.0040 ( 0.005 )	0.000 ( 0.005 )	0.001 ( 0.020 )	0.022 ( 0.649 )	0.005 ( 0.150 )	0.003 ( 0.096 )	0.024 ( 0.720 )	0.000 ( 0.003 )	0.0316 ( 0.948 )
1020	BAYDUNK BARREL & DRUM CO. 154 RAYMOND BLVD. NEWARK	0.0440 ( 1.220 )	0.448 ( 1.220 )	1.167 ( 3.180 )	0.650 ( 1.770 )	6.715 ( 18.500 )	0.067 ( 0.183 )	3.281 ( 8.940 )	0.021 ( 0.056 )	0.1101 ( 0.300 )
1030	BENJAMIN MOORE & CO. 134 LISTER AVE. NEWARK	0.0320 ( 0.060 )	0.016 ( 0.060 )	0.755 ( 2.830 )	1.022 ( 3.830 )	0.899 ( 3.370 )	0.270 ( 1.010 )	2.989 ( 11.200 )	0.009 ( 0.033 )	0.0000 ( 0.000 )
1032	BENNET HEAT TREATING CO. INC. 690 FERRY ST. NEWARK	0.0160 ( 0.005 )	0.001 ( 0.005 )	0.001 ( 0.005 )	0.013 ( 0.098 )	0.001 ( 0.005 )	0.001 ( 0.005 )	0.002 ( 0.013 )	0.000 ( 0.001 )	0.0000 ( 0.000 )
1035	BESSEMER PROCESSING CO. INC. 135 HAYNES AVE. NEWARK	0.0450 ( 0.057 )	0.021 ( 0.057 )	0.123 ( 0.327 )	0.087 ( 0.232 )	0.310 ( 0.826 )	0.030 ( 0.090 )	0.150 ( 0.401 )	0.016 ( 0.042 )	0.0020 ( 0.005 )
1045	BLACK OXIDE PROCESSING CORP. 85 GOTHARD ST. NEWARK	0.0110 ( 0.005 )	0.000 ( 0.005 )	1.477 ( 16.105 )	0.015 ( 0.168 )	0.000 ( 0.005 )	0.000 ( 0.005 )	0.174 ( 1.895 )	0.000 ( 0.001 )	0.0000 ( 0.000 )
1050	BLUE LINE INC. 209 PARKHURST ST. NEWARK	0.0160 ( 0.008 )	0.001 ( 0.008 )	1.575 ( 11.800 )	4.777 ( 35.800 )	0.031 ( 0.233 )	3.496 ( 26.200 )	0.063 ( 0.470 )	0.001 ( 0.011 )	0.0004 ( 0.003 )

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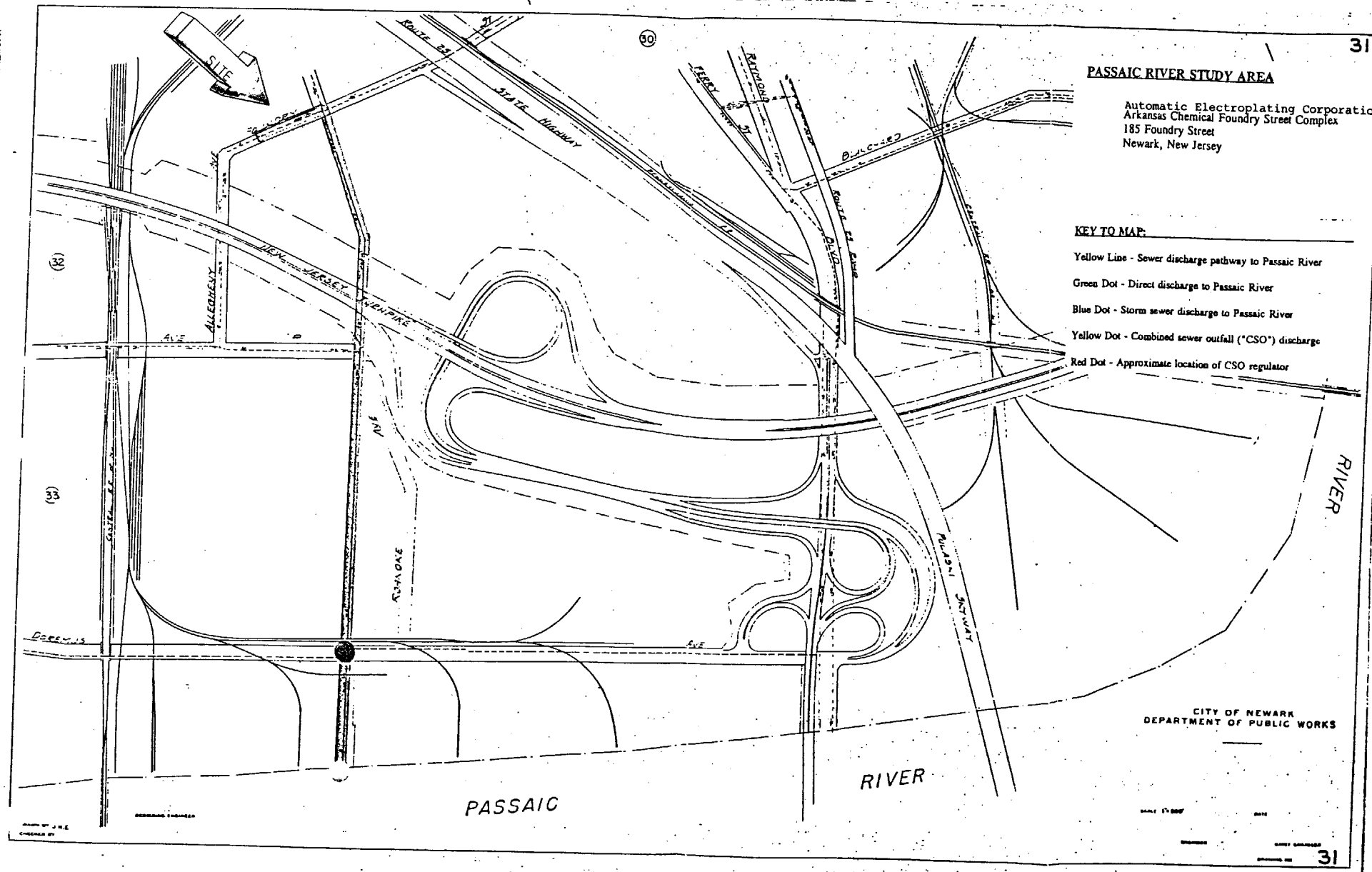
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# PASSAIC RIVER STUDY AREA

Automatic Electroplating Corporation  
Arkansas Chemical Foundry Street Complex  
185 Foundry Street  
Newark, New Jersey

## KEY TO MAP:

- Yellow Line - Sewer discharge pathway to Passaic River
- Green Dot - Direct discharge to Passaic River
- Blue Dot - Storm sewer discharge to Passaic River
- Yellow Dot - Combined sewer outfall ("CSO") discharge
- Red Dot - Approximate location of CSO regulator



CITY OF NEWARK  
DEPARTMENT OF PUBLIC WORKS

DATE: 1/1/80

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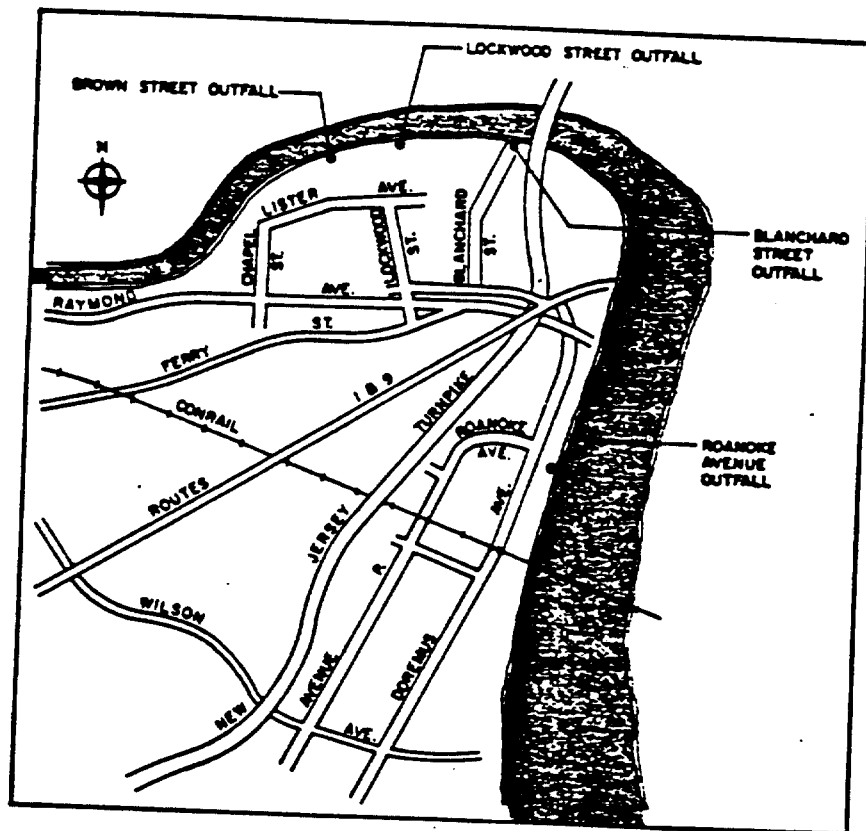
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City of Newark, New Jersey  
Feasibility Study

# POLLUTION ABATEMENT PROGRAM



Clinton Bogert Associates  
Consulting Engineers  
September, 1973  
Revised January, 1973

843600036

# CLINTON BOGERT ASSOCIATES

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2125 CENTER AVENUE - PORT LEE, NEW JERSEY 07024  
(201) 844-1676 • CABLE: BOGERTENG FORTLEENJ

January 24, 1979

Honorable Kenneth A. Gibson, Mayor  
City of Newark  
City Hall  
920 Broad Street  
Newark, New Jersey 07102

Re: Pollution Abatement

Dear Mayor Gibson:

In accordance with our contract dated February 15, 1978, submitted herewith is our report on the sources of pollution discharging to the lower Passaic River during dry weather from the Roanoke Avenue combined sewer system and the Blanchard, Lockwood, and Brown Street storm sewer systems. Each system is discussed in a separate section which contains:

- (1) A description of the existing sewers.
- (2) Findings of the physical inspection.
- (3) Conclusions and recommendations applicable to that system.

Appropriate additional items are included as follows:

- (1) For the Roanoke Avenue combined sewer system (Section III), a hydraulic analysis is presented. Significant conclusions are:
  - (a) all dry weather overflows may not be eliminated by rehabilitation of the existing system alone; but either flow routing, using storage available in the existing sewers, or increased interceptor capacity is required; and,
  - (b) a faulty regulator results in all sewage flows discharging untreated to the Passaic River.
- (2) For the Blanchard Street storm sewer (Section IV), the results of dry weather flow sampling and gauging, smoke testing and T.V. inspection are presented. Significant conclusions are the need to:
  - (a) replace about 1,300 feet of existing 24" storm sewer which appears in danger of collapse,
  - (b) improve housekeeping around industrial railroad sidings, and,

843600037



Honorable Kenneth A. Gibson, Mayor  
City of Newark  
City Hall  
920 Broad Street  
Newark, New Jersey 07102



January 24, 1979  
Page 3

We would be pleased to meet with you to review any matters contained herein. We wish to express our appreciation of the assistance given us by members of your staff, particularly Mr. Robert Benz, in carrying forward this work.

Very truly yours,

CLINTON BOGERT ASSOCIATES

Herbert L. Kaufman  
P.E., N.J. Lic. No. 13647

HLK:mmb  
Enclosure

843600038

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## I. Introduction

Polluted liquid wastes are being discharged into the lower Passaic River from four sewers owned by the City of Newark. These wastes include continuous discharges from the wet weather outfall of the Roanoke Avenue combined sewer, and the Blanchard Street and the Lockwood Street storm sewers, and intermittent discharges from the Brown Street sewer. During dry weather, no flow should be discharged from the Roanoke Avenue outfall and only non-polluted water from the Blanchard Street, Lockwood Street, and Brown Street storm sewers, however, high levels of pollutants have been detected in the dry weather discharges at all four locations. The following ranges of pollutant concentrations and pH have been reported by the Passaic Valley Sewerage Commissioners (PVSC) during the last two-years.

### Pollutant Concentration (ppm)

<u>Location</u>	<u>TSS</u>	<u>COD</u>	<u>BOD</u>	<u>pH</u>
Roanoke Avenue	5-1428	116-15600	102-6300	2.0-7.3
Blanchard Street	5-1070	51-2815	7-420	1.9-8.2
Lockwood Street	16-3148	119-3408	8-840	3.3-9.2
Brown Street	7-93	42-352	16-135	6.2-9.8

A non-functioning regulator causes the dry weather discharge at Roanoke Avenue. Illegal connections, surface chemical spillage and contaminated groundwater are the sources of pollutants detected in the three storm sewers.

Water from the Passaic River may enter all four sewers with the incoming tide and dilute the pollutant concentration. The pollutants may also be carried upstream of their entering points. Polluted flow from the sewer increases in rate with the falling tide. The highest

pollutant concentration and flow rates can be expected at low tide. During this study, samples were obtained within the three storm sewers systems at or near the times of low tide. The analytical test results of these samples are included in Appendix A.

## II. SCOPE OF WORK

The PVSC industrial waste surveys for each industry in the tributary area have been reviewed and the probable pollutants in each industrial waste compared with those found in the sewer discharges. All manholes, regulators, tide gates, and inlets have been inspected. The condition and serviceability of sewerage facilities was noted. Connections to manholes and inlets and other sources of flow were located. Spillage and housekeeping procedures at the various industrial facilities were observed. Dry weather flow sampling points were selected, and dry weather flow sampled to isolate sources of pollution entering the storm sewer systems. Where possible, storm and sanitary sewers were smoke tested to locate cross connections, and the sections of storm sewer suspected of having industrial waste connections were inspected with closed circuit television. In some reaches, television inspection was not possible because of physical blockages or waste pools resulting from irregular sewer grades. The condition of the various pipes was determined and the location of improper or suspicious connections noted. The results of these investigations were analyzed and are presented in this report. Recommendations for eliminating all the sources of pollution identified by the described techniques are included.

### III. Roanoke, Doremus and Wilson Avenue Sewers

#### A. Existing Sewers

The present sewer layout is shown on Plate 1. The manholes on Wilson Avenue are numbered consecutively from W-1 in the Avenue "P" intersection to W-9 on the westerly side of Doremus Avenue. The manholes on Doremus Avenue are numbered consecutively from D-1 on the northerly side of Wilson Avenue to D-28 on the southerly side of the Roanoke Avenue regulator. Changes made in 1951 to accommodate construction of the New Jersey Turnpike included construction of the Avenue "P" regulator on the 54-inch Roanoke Avenue combined sewer at a point approximately 1425 feet upstream of Doremus Avenue. The regulator was planned to divert all dry weather flow to the Doremus Avenue interceptor through a new 24-inch sanitary sewer paralleling the 54-inch Roanoke Avenue combined sewer. The combined sewer downstream of the Avenue "P" regulator was converted to a wet weather outfall. The 18-inch sanitary sewer in the northern portion of Doremus Avenue was connected to the new 24-inch sanitary sewer by an inverted siphon passing under the 54-inch Roanoke combined sewer and its flow bypasses the old Roanoke Avenue regulator which was sealed off and abandoned. Sewage in the Doremus Avenue sewer flows to the Wilson Avenue interceptor and discharges to the PVSC interceptor. All excess wet weather flow in the Roanoke Avenue combined sewer was intended to overflow the Avenue "P" regulator weir and discharge to the Passaic River.



B. Physical Inspection Findings

(1) Avenue "P" Regulator and Roanoke Outfall Sewer

The Avenue "P" regulator is not functioning. Over two feet of dry, granular sediment blocks the regulator gate chamber and prevents flow between the diversion chamber and the Roanoke Avenue dry weather sewer. As a result, all flow in the Roanoke Avenue combined sewer enters the Passaic River through the Roanoke Avenue outfall. There is no visible evidence of chemical attack or deterioration of the concrete regulator structure. The regulator mechanism is corroded and not functional. A wooden overflow weir, provided in the diversion chamber, is intact. This weir does not cause the upstream pipe to surcharge above the crown in dry weather. It does reduce upstream flow velocity and causes sedimentation. About 0.5 feet of primarily granular sediment was found in the combined sewer above the regulator. This material accumulates in dry weather and the lighter fractions, probably including most organic pollutants, may be flushed toward the Passaic River during relatively small rainfall events. Tests of wet weather flows in other areas indicate the flushing of such solids is accompanied by a large increase in BOD. High tides cause backup, reduce velocities, and cause sediment accumulation in the Roanoke Avenue outfall during dry weather. Some of this material may be carried away by the flow at low tide and some is scoured out by wet weather flows. About 0.2 feet of primarily granular sediment was found in the outfall sewer downstream of the Avenue "P" regulator. The size of this sewer changes to 60-inch at a manhole on the easterly side of Doremus Avenue. Remnants of the brick dam, used to divert flow into the Roanoke Avenue regulator, were observed in this manhole. There are two tide gate chambers in the 60-inch outfall. Both tide gates can swing open but neither can close completely because of sediment. No deterioration of the concrete was visible in

the tide gate chambers. A lump of bituminous material is partially blocking the discharge of the 60-inch outfall.

(2) Roanoke Avenue Sanitary Sewer

The 24-inch Roanoke Avenue sanitary sewer does not receive any flow at its upstream end because of the previously described blockage in the Avenue "P" regulator gate chamber. The manhole in the 24-inch sanitary sewer immediately downstream of the regulator contains over two feet of dry sediment. The sewer receives flow from the Pitt Consol Chemical Company downstream of that manhole. About 0.5 feet of a black, tar-like sediment was found in the sewer downstream of the Pitt Consol connections. The same black material was observed on the ground surface at the Pitt Consol plant. This material was not evident upstream of the Avenue "P" regulator or in the Roanoke Avenue outfall. Its source is evidently Pitt Consol. Sampling and analysis done jointly by the PVSC laboratory and Pitt Consol also detected chemicals used at the plant in the Roanoke Avenue outfall. However, no connections from Pitt Consol were found in the outfall. Spillage appears to have contaminated the groundwater and some appears to be leaking into the outfall. Groundwater pollution may also be leaking directly into Newark Bay. Groundwater pollution was not investigated since it was outside the scope of this study.

(3) Doremus Avenue Interceptor

The Doremus Avenue interceptor receives flow from the Roanoke Avenue sanitary sewer. Severe sedimentation was noted in this line. The first four lengths of 24-inch pipe upstream from Wilson Avenue (D-1 to D-5) were constructed on a reverse grade and the fifth length (D-5 to D-6) laid flat. The invert at Wilson Avenue is 1.2 feet higher than the low point where the minimum flow depth is greater than half pipe. Further upstream the sewer size changes from 24-inch to 22-inch and then to 20-inch in diameter. Sediment depth in the

**F**

**843600048**



# Preliminary Assessment

Foundry Street Site/Arkansas Chemical  
171-183 Foundry St.  
Newark, Essex County

843600049



POTENTIAL HAZARDOUS WASTE SITE  
PRELIMINARY ASSESSMENT  
PART 1 - SITE INFORMATION AND ASSESSMENT

IDENTIFICATION

01 STATE 02 SITE NUMBER

I. SITE NAME AND LOCATION

01 SITE NAME & TYPE (including all previous names of site)

Foundry Street Site/Arkansas Chemical

02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER

171-183 Foundry Street

03 CITY

Newark

04 STATE

NJ

05 ZIP CODE

06 COUNTY

Essex

07 COUNTY CODE

08 CENSUS DIST

09 COORDINATES LATITUDE

40° 43' 34"

LONGITUDE

74° 08' 01"

Block 5005 Lot 5

10 DIRECTIONS TO SITE (starting from nearest major road)

New Jersey Turnpike to Exit 15 E. Get onto Doremus Ave. and make a right onto Roanoke Ave. Follow Roanoke to Foundry St. The site is approximately 1000 feet down Foundry Street.

II. RESPONSIBLE PARTIES

01 OWNER of site

City of Newark

02 STREET (including mailing address)

920 Broad Street

03 CITY

Newark

04 STATE

NJ

05 ZIP CODE

06 TELEPHONE NUMBER

( )

07 OPERATOR of site and operator of site

(former owner & operator)  
Arkansas Chemical Co.

08 STREET (including mailing address)

171-183 Foundry St.

09 CITY

Newark

10 STATE

NJ

11 ZIP CODE

12 TELEPHONE NUMBER

( )

13 TYPE OF OWNERSHIP (check one)

☐ A. PRIVATE ☐ B. FEDERAL

☐ C. STATE

☐ D. COUNTY

☐ E. MUNICIPAL

☐ F. OTHER

☐ G. UNKNOWN

14 OWNER/OPERATOR NOTIFICATION ON FILE (check one)

☐ A. RCRA 3001 DATE RECEIVED

MONTH DAY YEAR

☐ B. UNCONTROLLED WASTE SITE (RCRA 102(a)) DATE RECEIVED

MONTH DAY YEAR

☐ C. NONE

IV. CHARACTERIZATION OF POTENTIAL HAZARD

01 ON SITE INSPECTION

☐ YES

DATE

Numerous

☐ NO

02 CHECK ONE

☐ A. EPA

☐ B. EPA CONTRACTOR

☐ C. STATE

☐ D. OTHER CONTRACTOR

☐ E. LOCAL HEALTH OFFICIAL

☐ F. OTHER

CONTRACTOR NAME(S)

03 SITE STATUS (check one)

☐ A. ACTIVE

☐ B. INACTIVE

☐ C. UNKNOWN

04 YEARS OF OPERATION

1943

1983

☐ UNKNOWN

05 DESCRIPTION OF SUBSTANCES POSSIBLY PRESENT, KNOWN OR ALLEGED

Numerous hazardous substances including benzene, carbon tetrachloride, 1,4 dioxane, methyl isocyanate, and many other toxic, corrosive and flammable substances have been abandoned at the site.

06 DESCRIPTION OF POTENTIAL HAZARD TO ENVIRONMENT AND/OR POPULATION

Due to deteriorating conditions present at the site and the presence of flammable, explosive and highly toxic substances, a potential for population exposure exists. The site is near heavily travelled roadways and residential areas, a potential for air, groundwater, surface water and soil contamination also exists.

V. PRIORITY ASSESSMENT

01 PRIORITY FOR INSPECTION (check one) (Rank in order of inspection, according to Part 2 - Waste Characterization and Part 3 - Description of Potential Contaminants and Resources)

☐ A. HIGH

☐ B. MEDIUM

☐ C. LOW

☐ D. NONE

VI. INFORMATION AVAILABLE FROM

01 CONTACT

Dave Beeman

02 OF (Agency/Department)

NJDEP/DWM/Metro Field Office

03 TELEPHONE NUMBER

201 669-3960

04 PERSON RESPONSIBLE FOR ASSESSMENT

Robert Beretsky

05 AGENCY

NJDEP

06 ORGANIZATION

HWM/BPA

07 TELEPHONE NUMBER

1609 633-2215

08 DATE

MONTH DAY YEAR



POTENTIAL HAZARDOUS WASTE SITE  
PRELIMINARY ASSESSMENT  
PART 2 - WASTE INFORMATION

I. IDENTIFICATION

01 STATE 02 SITE NUMBER

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES (check all that apply)

01 A SOLID 01 B SLURRY  
01 B POWDER/FINES 01 F LIQUID  
01 C SLUDGE 01 G GAS  
01 D OTHER (Specify)

02 WASTE QUANTITY AT SITE

(check one)

TONS

CUBIC YARDS

NO OF DRUMS

03 WASTE CHARACTERISTICS (check all that apply)

01 A TOXIC 01 E SOLUBLE 01 I HIGHLY VOLATILE  
01 B CORROSIVE 01 F INFECTIOUS 01 J EXPLOSIVE  
01 C RADIOACTIVE 01 G FLAMMABLE 01 K REACTIVE  
01 D PERSISTENT 01 H IRRITABLE 01 L INCOMPATIBLE  
01 M NOT APPLICABLE

III. WASTE TYPE

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
SLU	SLUDGE			Many of the chemicals listed are taken from an inventory provided by Mark Von Sternberg of Arkansas Chemical. The accuracy of the inventory is not known.
OLW	OLY WASTE			
SOL	SOLVENTS			
PSC	PESTICIDES			
OC	OTHER ORGANIC CHEMICALS			
IC	INORGANIC CHEMICALS			
ACD	ACIDS			
BAS	BASES			
MES	HEAVY METALS			

IV. HAZARDOUS SUBSTANCES (check all that apply)

01 CATEGORY	02 SUBSTANCE NAME	03 CAS NUMBER	04 STORAGE/ DISPOSAL METHOD	05 CONCENTRATION	06 MEASURE OF CONCENTRATION
OCC	Butyl Alcohol				
OC	Acetic Anhydride	108-24-7			
IOC	Ammonium Bromide	12124979			
ACD	70% Methane Sulfonic Acid				
OCC	Ethylene Diamine	107-15-3			
BAS	Soda Flake				
SOL	Perchloroethylene	127-18-4			
OCC	Methanol	67-56-1			
IOC	Silane				
OCC	Isophorone diisocyanate	4098-71-9			
OCC	Propylpiperidine	103-88951			
ACD	Lactic Acid	50215			
OCC	Polyethylene Glycol	25322683			
ACD	Sulfuric Acid	7664-43-9			
IOC	Ammonia	7664-41-7			
OCC	Diethylamine	109-89-7			

V. FEEDSTOCKS (check all that apply)

CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER	CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER
FDS			FDS		
FDS			FDS		
FDS			FDS		
FDS			FDS		

VI. SOURCES OF INFORMATION (check all that apply)



POTENTIAL HAZARDOUS WASTE SITE  
PRELIMINARY ASSESSMENT  
PART 2 - WASTE INFORMATION

1 IDENTIFICATION  
01 STATE 02 SITE NUMBER

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES (Check all that apply)

- ☐ A SOLID  
☐ B POWDER/FINES  
☐ C SLUDGE  
☐ D OTHER \_\_\_\_\_  
☐ E SLURRY  
☐ F LIQUID  
☐ G GAS

02 WASTE QUANTITY AT SITE

TONS \_\_\_\_\_  
CUBIC YARDS \_\_\_\_\_  
NO. OF DRUMS \_\_\_\_\_

03 WASTE CHARACTERISTICS (Check all that apply)

- ☐ A TOXIC  
☐ B CORROSIVE  
☐ C RADIOACTIVE  
☐ D PERSISTENT  
☐ E SOLUBLE  
☐ F INFECTIOUS  
☐ G FLAMMABLE  
☐ H INSTABLE  
☐ I HIGHLY VOLATILE  
☐ J EXPLOSIVE  
☐ K REACTIVE  
☐ L INCOMPATIBLE  
☐ M NOT APPLICABLE

III. WASTE TYPE

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
SLU	SLUDGE			
OLW	OLY WASTE			
SOL	SOLVENTS			
PSO	PESTICIDES			
OCC	OTHER ORGANIC CHEMICALS			
IOC	INORGANIC CHEMICALS			
ACD	ACIDS			
BAS	BASES			
HES	HEAVY METALS			

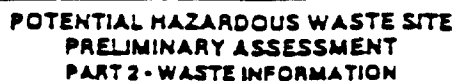
IV. HAZARDOUS SUBSTANCES (List all hazardous substances with CAS numbers)

01 CATEGORY	02 SUBSTANCE NAME	03 CAS NUMBER	04 STORAGE/ DISPOSAL METHOD	05 CONCENTRATION	06 MEASURE OF CONCENTRATION
COL	Benzene	71-43-2			
CL	Carbon Tetrachloride	56-23-5			
OCC	Hexane				
IOC	Phosphoric Anhydride	1314-56-3			
SOL	Acetone	67-64-1			
OCC	1,4 Dioxane	123-91-1			
OCC	Ethyl Amine	75-04-7			
OCC	Ethylene Carbonate	964591			
OCC	Methyl Isocyanate	624-83-9			
SOL	Mineral Spirits				
OCC	Isopropanol	67-63-0			
SOL	Xylol (Xylene)	1330-20-7			
SOL	Chloroform	67-66-3			
IOC	Sodium Nitrate	7631-99-4			
IOC	Sodium Acetate				
IOC	Sodium Formate				

V. FEEDSTOCKS (List all feedstocks with CAS numbers)

CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER	CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER
FDS			FDS		
FDS			FDS		
FDS			FDS		
FDS			FDS		

VI. SOURCES OF INFORMATION (List all sources of information)



### IDENTIFICATION

01 STATE 02 SITE NUMBER

## II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

<b>D1 PHYSICAL STATES</b> <i>(Select all that apply)</i> <input type="checkbox"/> A SOLID <input type="checkbox"/> B POWDER, FINES <input type="checkbox"/> C SLUDGE <input type="checkbox"/> D OTHER _____ <i>(Specify)</i>	<b>D2 WASTE QUANTITY AT SITE</b> <i>(Indicate if other quantities exist at the site)</i> TONS _____ CUBIC YARDS _____ NO. OF DRUMS _____	<b>D3 WASTE CHARACTERISTICS</b> <i>(Select all that apply)</i> <input type="checkbox"/> A TOXIC <input type="checkbox"/> B CORROSIVE <input type="checkbox"/> C RADIOACTIVE <input type="checkbox"/> D PERSISTENT <input type="checkbox"/> E SOLUBLE <input type="checkbox"/> F INFECTIOUS <input type="checkbox"/> G FLAMMABLE <input type="checkbox"/> H INSTABLE <input type="checkbox"/> I HIGHLY VOLATILE <input type="checkbox"/> J EXPLOSIVE <input type="checkbox"/> K REACTIVE <input type="checkbox"/> L INCOMPATIBLE <input type="checkbox"/> M NOT APPLICABLE
---	--	--

## IN. WASTE TYPE

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
SLU	SLUDGE			
OLW	OLY WASTE			
SOL	SOLVENTS			
PSO	PESTICIDES			
OCO	OTHER ORGANIC CHEMICALS			
IOC	INORGANIC CHEMICALS			
ACD	ACIDS			
BAS	BASES			
MES	HEAVY METALS			

IV. HAZARDOUS SUBSTANCES ~~See Appendix of this document and CAS numbers~~[illegible][illegible]

CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER	CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER
FDS			FDS		
FDS			FDS		
FDS			FDS		
FDS			FDS		

## VI SOURCES OF INFORMATION (Can include computer file, e.g., mailing list, telephone directory and telephone, etc.)

See Attachment L for a more legible version as provided by EPA-Edison  
Attachment A-1-37 - NJDEP/HSMA/Bureau of Field Operations  
Attachment A-30-56 - NJDEP/Environmental Quality/Metro Office  
Attachment A-57-59 - NJDEP/Haz. Waste Mgmt./Metro Field Office

**843600053**





POTENTIAL HAZARDOUS WASTE SITE  
PRELIMINARY ASSESSMENT  
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

1. IDENTIFICATION	
01 STATE	02 SITE NUMBER

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 ☐ A. GROUNDWATER CONTAMINATION 02 ☐ OBSERVED (DATE \_\_\_\_\_) ☐ POTENTIAL ☐ ALLEGED  
03 POPULATION POTENTIALLY AFFECTED: \_\_\_\_\_ 04 NARRATIVE DESCRIPTION

Chemicals spilled on the ground surface may migrate through the soil column and contaminate groundwater in the area.

Att. B,C

01 ☐ B. SURFACE WATER CONTAMINATION 02 ☐ OBSERVED (DATE \_\_\_\_\_) ☐ POTENTIAL ☐ ALLEGED  
03 POPULATION POTENTIALLY AFFECTED: \_\_\_\_\_ 04 NARRATIVE DESCRIPTION

Spilled chemicals could migrate to storm drains via runoff. Storm drains at the site discharge to the Passaic River.

Att. B,C,D

01 ☐ C. CONTAMINATION OF AIR 02 ☐ OBSERVED (DATE 1/23/81) ☐ POTENTIAL ☐ ALLEGED  
03 POPULATION POTENTIALLY AFFECTED: \_\_\_\_\_ 04 NARRATIVE DESCRIPTION

Chemical odors were observed by DEP personnel near the tank storage area and in the process building during an inspection at the site.

Att. B,F p. 1

01 ☐ D. FIRE/EXPLOSIVE CONDITIONS 02 ☐ OBSERVED (DATE \_\_\_\_\_) ☐ POTENTIAL ☐ ALLEGED  
03 POPULATION POTENTIALLY AFFECTED: \_\_\_\_\_ 04 NARRATIVE DESCRIPTION

Poor housekeeping by the former owners and vandalism at the site have allowed potentially incompatible substances to mix. Fuming and smoking bottles of materials were observed during an inspection of the site.

Att. E,F

01 ☐ E. TRESPASSING 02 ☐ OBSERVED (DATE \_\_\_\_\_) ☐ POTENTIAL ☐ ALLEGED  
03 POPULATION POTENTIALLY AFFECTED: \_\_\_\_\_ 04 NARRATIVE DESCRIPTION

Trespassers on the property come into contact with hazardous substances located throughout the site. Extremely hazardous materials including methyl isocyanate have been discovered in easily accessible buildings at the site. Att. G,H,I

01 ☐ F. CONTAMINATION OF SOIL 02 ☐ OBSERVED (DATE \_\_\_\_\_) ☐ POTENTIAL ☐ ALLEGED  
03 AREA POTENTIALLY AFFECTED: \_\_\_\_\_ 04 NARRATIVE DESCRIPTION

Spillage of chemicals at the site is evidenced by stained areas around storage tanks. The lack of adequate secondary containment systems allows for migration of chemicals into the soil.

Att. B,C

01 ☐ G. DRINKING WATER CONTAMINATION 02 ☐ OBSERVED (DATE \_\_\_\_\_) ☐ POTENTIAL ☐ ALLEGED  
03 POPULATION POTENTIALLY AFFECTED: \_\_\_\_\_ 04 NARRATIVE DESCRIPTION

There are no water supplies within a mile radius of the site, therefore no potential exists.

01 ☐ H. WORKER EXPOSURE/INJURY 02 ☐ OBSERVED (DATE \_\_\_\_\_) ☐ POTENTIAL ☐ ALLEGED  
03 WORKERS POTENTIALLY AFFECTED: \_\_\_\_\_ 04 NARRATIVE DESCRIPTION

Workers involved with the cleanup of the site could be exposed to hazardous materials. Employees of nearby industries could also be exposed to materials or odors from the site.

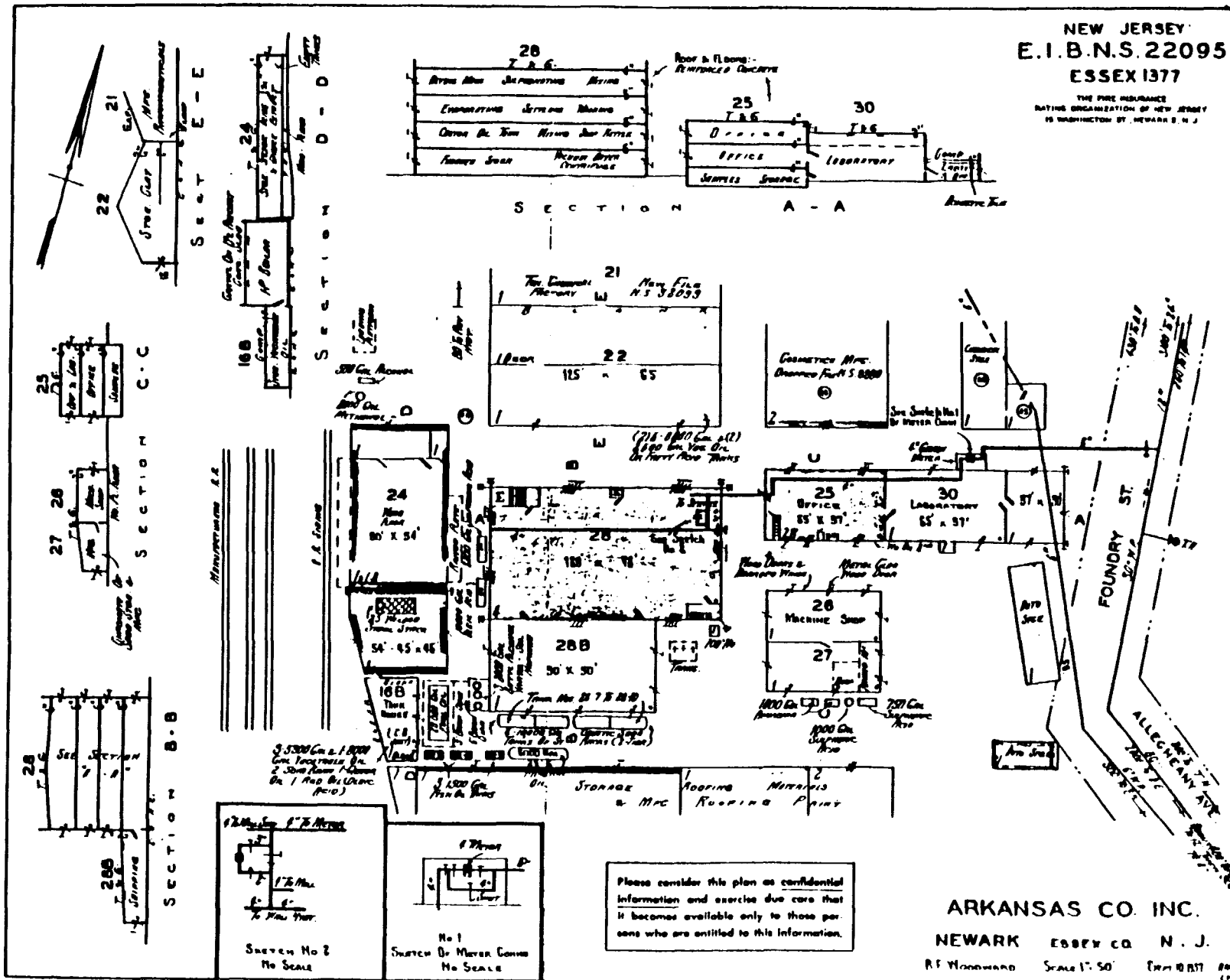
Att. B,F

01 ☐ I. POPULATION EXPOSURE/INJURY 02 ☐ OBSERVED (DATE \_\_\_\_\_) ☐ POTENTIAL ☐ ALLEGED  
03 POPULATION POTENTIALLY AFFECTED: \_\_\_\_\_ 04 NARRATIVE DESCRIPTION

Trespassers on the property could be exposed to hazardous substances located throughout the site. (Motorists travelling on the nearby NJ Turnpike or Route 1 & 9 could be exposed to toxic fumes which could emanate from the site as a result of mixing of incompatible materials or fires at the site.)

Att. G,H

THE FIRE INSURANCE  
PAYING ORGANIZATION OF NEW JERSEY  
IS WASHINGTON ST. NEWARK, N. J.



**843600055**



POTENTIAL HAZARDOUS WASTE SITE  
PRELIMINARY ASSESSMENT  
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

1 IDENTIFICATION  
01 STATE 02 SITE NUMBER

II HAZARDOUS CONDITIONS AND INCIDENTS

01 ☐ J DAMAGE TO FLORA 02 ☐ OBSERVED (DATE \_\_\_\_\_) ☐ POTENTIAL ☐ ALLEGED  
04 NARRATIVE DESCRIPTION  
Chemicals migrating offsite via storm drains could damage aquatic flora in the Passaic River.

Att. D

01 ☐ K DAMAGE TO FAUNA 02 ☐ OBSERVED (DATE \_\_\_\_\_) ☐ POTENTIAL ☐ ALLEGED  
04 NARRATIVE DESCRIPTION  
Chemicals migrating offsite via storm drains could damage aquatic fauna in the Passaic River.

Att. D

01 ☐ L CONTAMINATION OF FOOD CHAIN 02 ☐ OBSERVED (DATE \_\_\_\_\_) ☐ POTENTIAL ☐ ALLEGED  
04 NARRATIVE DESCRIPTION  
The food chain in the Passaic River could be contaminated by hazardous substances entering the river via storm drains.

Att. D

01 ☐ M UNSTABLE CONTAINMENT OF WASTES 02 ☐ OBSERVED (DATE NUMEROUS) ☐ POTENTIAL ☐ ALLEGED  
03 POPULATION POTENTIALLY AFFECTED \_\_\_\_\_ 04 NARRATIVE DESCRIPTION  
Hazardous materials have been spilled and containers were observed broken, leaking or unsecure. Secondary containment at the site is inadequate to prevent migration of contaminants into soil or groundwater. Att. E-H

04 NARRATIVE DESCRIPTION

02 ☐ OBSERVED (DATE \_\_\_\_\_) ☐ POTENTIAL ☐ ALLEGED

Fires at the site could easily spread to nearby industries. Hazardous materials could damage the Passaic Valley Sewage Treatment plant.

Att. B,D,E,F,K

01 ☐ O CONTAMINATION OF SEWERS, STORM DRAINS, WWTPs 02 ☐ OBSERVED (DATE \_\_\_\_\_) ☐ POTENTIAL ☐ ALLEGED  
04 NARRATIVE DESCRIPTION  
Hazardous materials could contaminate the Passaic Valley Sewage Treatment Plant and disrupt treatment processes. Storm drains could be contaminated by runoff containing hazardous materials.

Att. B,D,K

01 ☐ P ILLEGAL/UNAUTHORIZED DUMPING 02 ☐ OBSERVED (DATE NUMEROUS) ☐ POTENTIAL ☐ ALLEGED  
04 NARRATIVE DESCRIPTION  
Poor housekeeping by the former owner and vandalism have resulted in hazardous materials being spilled and dumped throughout the site.

Att. E-H

05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL OR ALLEGED HAZARDS

III TOTAL POPULATION POTENTIALLY AFFECTED: \_\_\_\_\_

IV COMMENTS

The EPA is the lead agency involved with the site. A removal of all materials present and decontamination of buildings and all process vessels at the site are scheduled to begin in May 1987.

SOURCES OF INFORMATION

Attachment A1-37, 55-57 - NJDEP/DHWM/Metro Field Office  
Att. A39-54 & 58-61 - NJDEP/Environmental Quality/Metro Field Office  
Att. B,C,F,H,K - NJDEP/DHWM/Metro Field Office  
Att. D & L - EPA-Edison

FOIA 2010 1217.811

Att. E & I 1-8 - NJDEP/HSMA/Bureau Site Operations

Att. I 9

843600056

FOUNDRY STREET SITE/ARKANSAS CHEMICAL COMPANY  
185 FOUNDRY STREET  
NEWARK, ESSEX COUNTY

The Arkansas Chemical Company manufactured chemicals for the textile industry at 171-183 Foundry Street in Newark, Essex County from 1943 to September 1983. Arkansas Chemical Company owned the property from 1943 until 1978 when Galaxy Inc., a Florida Corporation, purchased the property. Mark Von Sternberg was president of both Galaxy, Inc. and Arkansas Chemical Company. In September 1983 the City of Newark foreclosed on the property for failure of the company to pay real estate taxes. Arkansas Chemical Company and Galaxy, Inc. filed for voluntary bankruptcy in October and December 1983. Assests to both companies have been liquidated.

In 1984, inspections at the site by the NJDEP had revealed that hazardous materials were abandoned at the site. A Directive Letter was issued to Arkansas Chemical Company by the NJDEP in September 1984 as a result of conditions observed during the inspections. According to the Directive, the company was to secure access to the site, provide a list of materials present, and remove and properly dispose of all containers and contaminated soil at the site. An inventory of materials stored on site was provided by Mark Von Sternberg and funds were provided by the U.S. Bankruptcy Court to initiate cleanup. This initial cleanup consisted of moving the remaining materials outside into one of the buildings. Since the completion of the initial measures in January 1985, no other remedial actions have been undertaken by the company. As of April 1987, laboratory chemicals and approximately 500 drums, many of which contain hazardous or unknown substances remain at the site. Contaminated process vessels and laboratory equipment remain as well.

In May of 1985 the company filed for ECRA (Environmental Cleanup Responsibility Act) status as a result of proposed sale of the property. The deal was terminated in July 1985 and ECRA status was deactivated. The company is subject to ECRA if transfer of property occurs even though they filed for bankruptcy before ECRA was enacted because hazardous materials were stored on site after the December 31, 1983, enactment of ECRA.

Inspections by NJDEP in late 1986 and early 1987 have revealed continued deteriorating conditions at the site. There are six buildings and two sheds on site (see site map), all of which may contain hazardous substances. Building 28, which consists of 4 floors was probably the main process building. Approximately 450 drums are present in this building, many of which are leaking. Also present in this building are 6-10 process tanks, 10-15 holding/mixing tanks and 2 dry material mixers. Many of the lines to the tanks were leaking and powders and resins were spilled throughout the building. According to an inventory of bulk storage tanks at the site (Att: A p. 40), the following substances were present: 1-3500 gallon tank of Formaldehyde, 1-2700 gallon of Emulser OM (tradename), 1-2700 gallon tank of Dergon OM (tradename), 1-4000 gallon tank of Olive Elaine (tradename), 1-5000 gallon tank of Syponie 4-500 (tradename), 1-4000 gallon tank of Ingepal 730 (tradename) and 1-1750 gallon tank of diethylene glycol. It is unknown if any materials remain in these tanks. There are also two laboratories present in Building 28 which also contain chemicals. The drums moved from the outside during the initial cleanup were also stored here and the roof was leaking in many areas.

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Buildings 25 and 30 are attached (consider as building 25/30) and consist of offices and laboratories. All of the laboratories contain various amounts of chemicals of which three bottles were observed to be fuming or smoking. Numerous other deficiencies were ceilings and a flooded basement. Many chemical containers were submerged in the flooded basement. Spillage and leakage of chemicals throughout this building is also evident.

Building 24 consists of one story and contains approximately 25 drums of unknown content.

Buildings 26 and 27 (designated building 26/27) are attached and contain storage vessels, a filter press and approximately 20 drums. According to the inventory provided by Arkansas in 1981, (Att: A p. 40) two storage tanks consisting of 1-5000 gallon tank of Ingepal CO-710 (tradename) were inside building 27. The contents of the drums are unknown.

The two on site sheds also contain containers of chemical substances. One shed contains approximately 40 drums of unknown materials. One drum in this shed which was opened contained chunks of a solid beige substance (possibly tallow). It is unknown if the other drums contain similar substances.

The second shed contains approximately 25-5 gallon containers of various chemicals including benzene, carbon tetrachloride, and 1,4 dioxane. A container of methyl isocyanate, which is included in the Toxic Catastrophe Prevention Act as requiring immediate removal, was also discovered and later removed from this shed.

According to the site map, there are 18 storage vessels outside the buildings. These vessels are believed to be empty but may contain residual materials. The site map, which was produced in 1957, labels the contents for each of these vessels. However, it is not believed that the most recent contents of these tanks corresponds to those labeled on the site map. According to the 1981 inventory as supplied by Arkansas, only 12 of the 18 vessels were in use (Att: A p. 40). The contents of the tanks as listed by Arkansas includes 1-2016 gallon and 1-4050 gallon tank of sulfuric acid, 2-10076 gallon tanks of 33% caustic soda, 2-2400 gallon tanks of solvent naptha, 1-10076 gallon tank of ammonia, 1-2400 gallon tank of \_?\_ 1-2828 gallon tank of N-20080 gallon fuel oil tank.

It should be noted that many of the materials remaining at the site are explosive flammable or incompatible (see Att: I for properties of chemicals). Since many materials have mixed or are in danger of mixing, a potential for extremely explosive and hazardous conditions exists at the site.

The leaking ceilings in many of the buildings and the chemicals submerged in the flooded basements also leads to concern since some of the chemicals on the site are water reactive. Acetic anhydride is explosive if contact with water, and phosphorus pentoxide and water are incompatible. Toly chloride (benzyl chloride) emits toxic and corrosive fumes if mixed with water. Also, quantities of heat could be generated from mixtures of water and various acids stored on site which could then cause reactions with heat sensitive chemicals. Because of the haphazard storage of materials at the site, any reactions between chemicals will likely result in chain reactions fires and explosions.

Since many of the chemicals will emit toxic and noxious fumes and smoke if a reaction should occur, a high potential for disaster exists because of the proximity of the site to residential areas and heavily travelled roadways. The New Jersey Turnpike is only a few hundred feet to the east of the site and Route 1 and 9 lies about 1000 feet to the west. The nearest residential area is approximately .25 miles west of the site.

Before on-site security was established in January 1987 by NJDEP and EPA, the site was easily accessible to the public. Vandalism, which was evident throughout the site, contributed to spillage and mixing of chemicals inside the buildings. A fire in one of the buildings in January 1987 was attributed to arson and could have been disastrous if it spread to flammable materials. Another cause for concern lies in the possibility that vandals may have unknowingly come into contact with hazardous materials including methyl isocyanate, benzene, chloroform or isopropyl alcohol to name a few. Many of the materials are skin absorbed and extremely toxic.

An inspection by NJDEP personnel in 1981 revealed inadequate secondary containment around the outdoor bulk storage tanks to prevent spilled material from entering the soil (Att: B pp. 1-2). The grounds around the tanks were observed to be stained from numerous spills. Also, materials which were stored outside may have leaked onto the ground surface. Spilled materials may leach through the soil and contaminate groundwater in the area which is used for industrial purposes. The potential also exists for contaminants to migrate to Newark Bay or the Passaic River via groundwater migration. Spilled materials or contaminated runoff may enter storm drains which discharge to the Passaic River. Any contaminants entering the river or Newark Bay may be detrimental to aquatic organisms.

Due to the immediate danger to public safety and the environment and the lack of state funds available for cleanup, the NJDEP requested assistance from the USEPA for removal of hazardous materials and site security in January 1987.

According to Thomas Kady of the EPA regional office in Edison, New Jersey, all materials will be removed from the site, and all on-site vessels and buildings will be decontaminated. Security at the site was initiated in January 1987, and removal of materials is scheduled to begin in May 1987. Long term remedial actions by EPA may include soil and groundwater investigations.

Since EPA is currently the lead agency in the case, no further action is recommended at this time. If soil and groundwater investigations are not undertaken by EPA, it is recommended that the NJDEP (Site Mitigation) develop an investigative program to assess the current potential hazards associated with the site.